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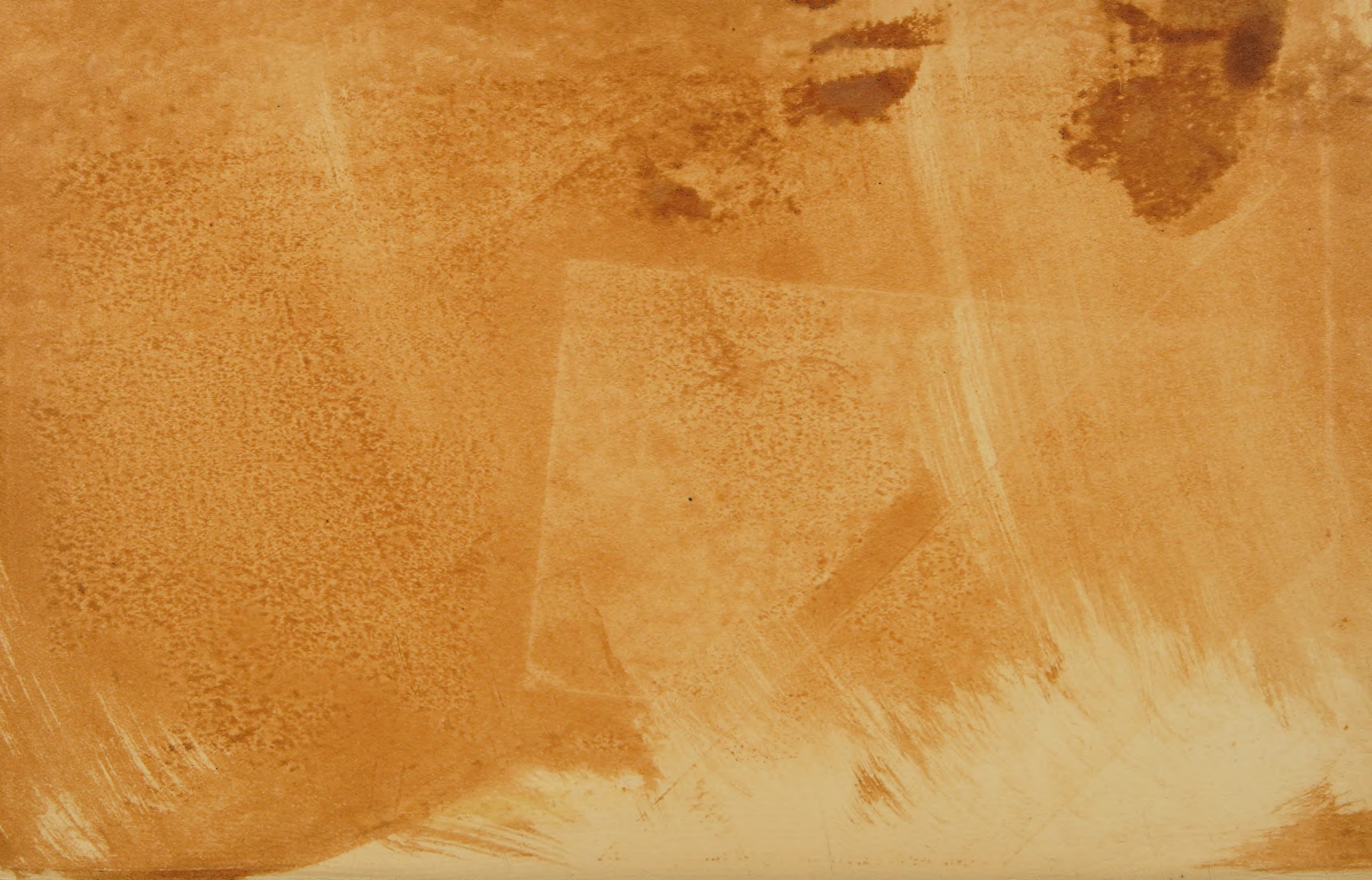

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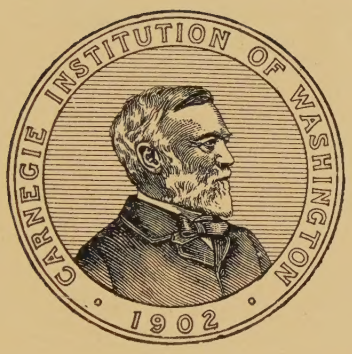

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SECOND BIBLIOGRAPHY AND CATALOGUE OF THE FOSSIL VERTEBRATA OF NORTH AMERICA

BY

OLIVER PERRY HAY

Vol. I

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ERRATA

On page 35, under Abel, O. 1922 D, the second word should read Schnauzenverletzungen.

On page 190, under Gilmore, C. W. 1909 B, the pages of the Proc. U. S. Nat. Mus. should read 35-42.

On page 191, under Gilmore, C. W. 1916 D, the plates should read lxxii-lxxviii.

On page 195, under Gilmore, C. W. 1927 D, the volume of the Smithson. Misc. Coll. should be LXXX, instead of LX.

On page 323 under Matthew and Granger 1925 A, instead of Amer. Mus. Novit., No. 186, read No. 189.

On page 342, under Mook, C. C. 1916 A, the volume cited should be XXVII, instead of XVII.

PREFACE

In 1902 the U. S. Geological Survey published for the writer a volume entitled "Bibliography and Catalogue of the Fossil Vertebrata of North America." Since that time, through research and publication, the knowledge of the structure and relationships of fossil vertebrates, the number of new genera and species, and their geological and geographical distribution have been greatly increased. A recognition of these facts has led to the production of this "Second Bibliography and Catalogue of the Fossil Vertebrata of North America."

This work follows the same plan in general as that adopted in the volume of 1902. There is first presented a list of the scientific publications from which papers have been selected for analysis and record and for citation under the appropriate zoological divisions of the Catalogue. As in the earlier volume, author's papers are listed under the year of publication followed by a letter of the alphabet, as Gill, T. 1884 A, B, etc. In case an author has one or more papers in the volume of 1902 and one or more in the present volume, any later paper will take the next letter of the proper year, as Gill, T. 1884 E. This explanation will account for some apparent irregularities. It must be noted that only rarely has the title of any paper found in the book of 1902 been republished in the present work; nor have, with few exceptions, citations from those papers been repeated.

In the Catalogue, in case the name of a species, genus, etc., is new, the name of its author and place of publication are given first and the author's name is italicised. If the species or genus is mentioned in the volume of 1902 a reference to that volume is given either first or it follows the name of the author of the zoological title.

As regards the systematic names of families, genera and species the writer has, as strictly as his knowledge has permitted, followed "The International Rules of Zoological Nomenclature." For the higher groups these rules do not prescribe. For the superfamilies the ending *oidæ*, as employed by Dr. Leonhard Stejneger and Mr. Gerrit S. Miller, has been adopted. For the suborders the ending *formes* has sometimes been used and for the orders occasionally the ending *morphi*. These are affixed to the root of the name of the typical genus of the family.

The Catalogue of the present volume embraces the Plagiostomi, the ichthyodorulites, the Osteichthyes and the Amphibia. The succeeding part of the work will deal with the Ichnites, the Reptilia, the Aves and

the Mammalia and will terminate with an index of the systematic names used in the Catalogues of both volumes.

Besides the territory covered by the volume of 1902 the writer includes Greenland, Mexico, and Central America.

The author hopes that the labor expended on the volumes of this work will be of some service to those who are interested in vertebrate paleontology. No doubt errors of all kinds will be found in the work, but these seem to be unavoidable. It is hoped that all the described species have been recorded, but possibly a few have been overlooked. The "Zoological Record" for 1927 and that for 1928 have not been received, and in consequence valuable papers may have been missed.

The author, in conclusion, acknowledges his indebtedness to the authorities of the U. S. National Museum for access to its libraries, its laboratories and collections and for kindly aid in accomplishment of the scientific work he has tried to do. He is under still greater obligations to the officers of the Carnegie Institution of Washington for the support and encouragement they have given him during the years which have passed.

Oliver P. Hay.

LIST OF ABBREVIATIONS

WITH TITLES OF BOOKS AND JOURNALS CITED

Aarbok Bergens Mus.—Bergens Museum Aarbok. Naturvidenskabelig Raecke. Bergen.

A. O. U.—Check-list of North American Birds. Prepared by a Committee of the American Ornithologists' Union. 3d edition (revised).

Abh. Akad. Wiss. Berlin.—Abhandlungen der königlichen preussischen Akademie der Wissenschaften zu Berlin. Physikalisch-mathematische Classe. Berlin.

Abh. bayer. Akad.—Abhandlungen der mathematisch-physikalischen Classe der königlichen bayerischen Akademie der Wissenschaften. München.

Abh. Ber. Mus. Natur-Heimatsk.—Abhandlungen und Berichte des Museums für Natur- und Heimatskunde zu Magdeburg. Magdeburg.

Abh. böhmisch. Ges.—Abhandlungen der mathematisch-naturwissenschaftlichen Classe der k. böhmischen Gesellschaft. Prag.

Abh. geol. Karte Elsass.—Abhandlungen zur geologischen Spezialkarte von Elsass-Lothringen. Strassburg.

Abh. geol. Landesanst. Darmstadt.—Abhandlungen der grossherzoglich-hessischen geologischen Landesanstalt zu Darmstadt. Cited also as Abh. hess. geol. Landesanst. Darmstadt.

Abh. geol. Reichsanst. Wien.—Abhandlungen der kaiserlich-königlichen geologischen Reichsanstalt. Wien.

Abh. Ges. Götting.—Abhandlungen der königlichen Gesellschaft der Wissenschaften zu Göttingen. Mathematisch-physikalische Klasse. Berlin.

Abh. Mus. Dresden.—Abhandlungen und Berichte des königlichen zoologischen und anthropologisch-ethnographischen Museums zu Dresden. Dresden.

Abh. naturf. Ges. Halle.—Abhandlungen der naturforschenden Gesellschaft. Halle.

Abh. naturh. Ges. Nürnberg.—Abhandlungen der naturhistorischen Gesellschaft zu Nürnberg.

Abh. naturw. Ges. Isis.—Sitzungsberichte und Abhandlungen der naturwissenschaftlichen Gesellschaft "Isis" in Dresden.

Abh. preuss. geol. Landesanst.—Abhandlungen der königlich-preussischen geologischen Landesanstalt. Berlin.

Abh. schweiz. pal. Ges.—Abhandlungen der schweizerischen palaeontologischen geologischen Gesellschaft. Also called Mémoires de la Société paléontologique suisse. Basel und Genf.

Abh. Senckenb. naturf. Ges.—Abhandlungen herausgegeben von der Senckenbergischen naturforschenden Gesellschaft. Frankfurt a. M.

Abh. zool.-bot. Ges. Wien.—Abhandlungen der k. k. zoologischen-botanischen Gesellschaft. Wien.

Act. Acad. Cien. Córdoba.—Actas de la Academia nacional de Ciencias en Córdoba. Buenos Aires.

Acta Acad. Leop.-Carol.—Nova Acta Academiæ Cæsareæ Leopoldino-Carolinæ Germanicæ naturæ curiosorum. Called also: Verhandlungen der k. Leop.-Carol. deutschen Akademie der Naturforscher. Halle.

Acta Acad. Sci. Petropol.—Acta Academiæ Scientiarum Imperialis Petropolitanæ. St. Petersburg.

Acta Soc. Faun. Fenn.—Acta Societatis pro Fauna et Flora Fennica. Helsingfors.

Acta Soc. Lund.—Acta regiæ Societatis physiographicæ Lundensis. See Acta Univ. Lund.

Acta Soc. Sci. Fenn.—Acta Societatis Scientiarum Fennicæ. Helsingfors.

Acta Soc. Sci. Upsal.—Nova Acta regiæ Societatis Scientiarum Upsaliensis. Upsala.

Acta Univ. Lund.—Acta Universitatis Lundensis. Called also: Lunds Universitets Arsskrift; and includes: Acta regiæ Societatis physiographicæ Lundensis; also called: Kongl. fysiografiska Sällskapets i Lund Handlingar. Lund, Sweden.

Acta Zool.—Acta Zoologica. Internationell Tidskrift för Zoologi. Stockholm.

Actes Mus. hist. nat. Rouen.—Actes du Muséum d'histoire naturelle de Rouen. Rouen.

Actes Soc. helvét. Sci. nat.—Actes de la Société helvétique des Sciences naturelles. Aarau. Same as Verh. schweiz. naturf. Ges.

Actes Soc. Linn. Bordeaux.—Actes de la Société Linnéenne de Bordeaux.

Aeronaut. Jour. London.—Aeronautical Journal. London.

Afh. Bergens Mus.—Afhandlinger og Aarsberetning, udgivne af Bergens Museum. Bergen.

Allg. Naturf.-Zeit.—Allgemeine Naturforscher-Zeitung. Berlin.

Amer. Anthrop.—The American Anthropologist. Lancaster.

Amer. Geologist.—The American Geologist; a monthly journal of geology and allied sciences. Minneapolis.

Amer. Invent.—American Inventor. New York.

Amer. Jour. Anat.—The American Journal of Anatomy. Baltimore.

Amer. Jour. Phys. Anthrop.—American Journal of Physical Anthropology. Washington.

Amer. Jour. Physiol.—The American Journal of Physiology. Boston.

Amer. Jour. Sci.—The American Journal of Science. New Haven.

Amer. Mercury.—The American Mercury. New York.

Amer. Micr. Jour.—The American Monthly Microscopical Journal. Washington.

Amer. Midl. Nat.—The American Midland Naturalist. Bimonthly. Notre Dame University. South Bend.

Amer. Month. Mag. Crit. Rev.—The American Monthly Magazine and Critical Review. 4 volumes 1817–1818. New York.

Amer. Mus. Guide leaflet.—American Museum of Natural History, Guide leaflet series. New York.

Amer. Mus. Jour.—The American Museum Journal. New York.

Amer. Mus. Novit.—American Museum Novitates. New York.

Amer. Naturalist.—The American Naturalist. Philadelphia, Boston, Lancaster.

An. Mus. La Plata.—Anales del Museo de La Plata. Buenos Aires.

An. Mus. Nac. Buenos Aires.—Anales del Museo Nacional de Historia Natural de Buenos Aires. Buenos Aires.

An. Mus. Nac. México.—Anales del Museo Nacional de México. Segunda época. México.

An. Mus. Nac. Montevideo.—Anales del Museo Nacional de Montevideo. Montevideo.

An. Soc. cien. Argent.—Anales de la Sociedad científica Argentina. Buenos Aires.

Anat. Anz.—Anatomischer Anzeiger. Centralblatt für die gesammte wissenschaftliche Anatomie. Amtliches Organ der anatomischen Gesellschaft. Jena.

Anat. Anz. Ergänzungsh.—Anatomischer Anzeiger. Ergänzungsheft, containing Verhandlungen der anatomischen Gesellschaft. Jena.

Anat. Hefte, Arb.—Anatomische Hefte. Erste Abteilung. Beiträge und Referate zur Anatomie und Entwickelungsgeschichte. Arbeiten aus anatomischen Instituten. Wiesbaden.

Anat. Hefte, Ergebn.—Anatomische Hefte. Zweite Abteilung. Ergebnisse der Anatomie und Entwickelungsgeschichte. Wiesbaden.

Anat. Record.—Anatomical Record. Wistar Institute of Anatomy and Biology. Philadelphia.

Anat. Stud.—Anatomische Studien. Herausgegeben von Dr. C. Hasse. Leipzig.

Ann. Brit. Geol.—Annals of British Geology. London.

Ann. Carnegie Mus.—Annals of the Carnegie Museum. Pittsburgh.

Ann. Durban Mus.—Annals of Durban Museum. Durban.

Ann. Hébert.—Annales Hébert. Annales de stratigraphie et de paléontologie du laboratoire de géologie de la faculté des Sciences de Paris. Paris.

Ann. Iowa.—Annals of Iowa. Des Moines.

Ann. Lyc. Nat. Hist. N. Y.—Annals of the Lyceum of Natural History of New York. New York.

Ann. Mag. Nat. Hist.—Annals and Magazine of Natural History, including Zoology, Botany, and Geology. London.

Ann. Med. Hist.—Annals of Medical History. New York.

Ann. Mus. Congo belge, Géol.—Annales du Musée du Congo belge. Bruxelles.

Ann. Mus. hist. nat. Belgique.—Annales du Musée royal d'histoire naturelle de Belgique. Bruxelles.

Ann. Mus. hist. nat. Marseille.—Annales du Musée d'histoire naturelle de Marseille. Zoologie. Marseille.

Ann. Mus. hist. nat. Paris.—Annales du Muséum d'histoire naturelle. Paris.

Ann. Mus. Hungar.—Annales Musei nationalis Hungarici. Budapest.

Ann. N. Y. Acad. Sci.—Annals of the New York Academy of Sciences. New York.

Ann. Nat. Hist.—Annals of Natural History, or Magazine of Zoology, Botany and Geology. London.

Ann. Natal Mus.—Annals of the Natal Government Museum. London.

Ann. naturh. Hofmus. Wien.—Annalen des k. k. naturhistorischen Hofmuseums. Wien.

Ann. Paléont. Paris.—Annales de Paléontologie. Paris.

Ann. Philos. Lond.—Annals of Philosophy. London.

Ann. Queensl. Mus.—Annals of Queensland Museum. Brisbane.

Ann. Rec. Sci. Indust.—Annual Record of Science and Industry. Edited by Spencer F. Baird. New York.

Ann. Sci. géol. Paris.—Annales des Sciences géologiques. Paris.

Ann. Sci. nat.—Annales des Sciences naturelles. Zoologie et Paléontologie. Paris.

Ann. Sci. nat. Bologna.—Nuovi Annali delle Scienze naturali. Bologna.

Ann. Soc. Agric. Lyon.—Annales de la Société d'Agriculture, Histoire naturelle et Arts utiles de Lyon. Lyons and Paris.

Ann. Soc. Agric. Puy.—Annales de la Société d'Agriculture, Sciences, etc., du Puy. Le Puy.

Ann. Soc. Belge Micr.—Annales de la Société Belge de Microscopie. Bruxelles.

Ann. Soc. géol. Belgique.—Annales de la Société géologique de Belgique. (Consist of Bulletin and Mémoires.) Liege.

Ann. Soc. géol. Nord.—Annales de la Société géologique du Nord. Lille.

Ann. Soc. Linn. Lyon.—Annales de la Société Linnéenne de Lyon. Lyon.

Ann. Soc. Méd. Gand.—Annales et Bulletin de la Société de Médecine de Gand. Gand.

Ann. Soc. scient. Bruxelles.—Annales de la Société scientifique de Bruxelles. Bruxelles.

Ann. Soc. zool. Belgique.—Annales de la Société royale zoologique et malacologique de Belgique. Mémoires et Bulletins. Bruxelles.

Ann. S. African Mus.—Annals of South African Museum. Cape Town.

Ann. Transvaal Mus.—Annals of Transvaal Museum. Pretoria.

Ann Univ. Lyon.—Annales de l'Université de Lyon. Sciences, Médecine. Lyon.

Ann. Wien. Mus. Zool. Abh.—Zoologische Abhandlungen aus den Annalen des Wiener Museums der Naturgeschichte. Wien.

Annuaire Géol. Min. Russie.—Annuaire géologique et minéralogique de la Russie. Nova Alexandria.

Annuaire Mus. St. Pétersb.—Annuaire du Musée zoologique de l'Académie impériale de St. Pétersbourg.

Annuar. Mus. Univ. Napoli.—Annuario del Museo zoologico della R. Università di Napoli. Napoli.

Anthrop. Pap. Amer. Mus. Nat. Hist.—Anthropological Papers of the American Museum of Natural History. New York.

Anz. Akad. Wiss. Wien.—Anzeiger der k. Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Classe. Wien.

Aquarium Bull.—The Aquarium Bulletin. Brooklyn, N. Y.

Aquila.—Aquila. Budapest.

Arb. anat. Inst. Univ. Sendai.—Arbeiten aus dem anatomischen Institut der kaiserlich-japanischen Universität zu Sendai. Tokyo.

Arb. Inst. Würzburg.—Arbeiten aus dem zoologischen-zootomischen Institut in Würzburg. Wiesbaden.

Arb. Naturf.-Ver. Riga.—Arbeiten des Naturforscher-Vereins zu Riga. Riga.

Arb. zool. Inst. Wien.—Arbeiten aus dem zoologischen Institut der Universität Wien und der zoologischen Station in Triest. Wien.

Arch. Anat. Entwickl.—Archiv für Anatomie und Entwickelungsgeschichte. Anatomische Abteilung des Archives für Anatomie und Physiologie. Leipzig.

Arch. Anat. micr. Paris.—Archives d'Anatomie microscopique. Paris.

Arch. Anat. Physiol. Leipzig.—See Arch. Anat. Entwickl.

Arch. Anat. Physiol. Med.—Archiv für Anatomie, Physiologie und wissenschaftliche Medicin. Berlin.

Arch. Anthropol.—Archiv für Anthropologie. Braunschweig.

Arch. Antropol. Etnol.—Archivio per l'antropologia e la etnologia. Firenze.

Arch. Biol.—Archives de Biologie. Gand, Paris, etc.

Arch. Biontol.—Archiv für Biontologie (Gesellschaft naturforschender Freunde). Berlin.

Arch. Comm. Sci. Mex.—Archives de la Commission scientifique du Mexique. Paris.

Arch. Dorpat. Ges.—Archiv für die Naturkunde Liv-, Esth- und Kurlands. Herausgegeben von der Dorpater Naturforscher-Gesellschaft. Dorpat.

Arch. Entwickl.-mech. Organ.—Archiv für Entwickelungsmechanik der Organismen. Leipzig.

Arch. Hydrobiol.—Archiv für Hydrobiologie. Organ der internationalen Vereinigung für theoretische und angewandte Limnologie. Stuttgart.

Arch. ital. Anat. Embr.—Archivio italiano di anatomia e di embriologia. Firenze.

Arch. ital. Biol.—Archives italiennes de Biologie. Turin, Pise.

Arch. mikr. Anat. Bonn.—Archiv für mikroskopische Anatomie. Bonn.

Arch. Min. Geogn. Bergb.—Archiv für Mineralogie, Geognosie, Bergbau, etc. Berlin.

Arch. Mus. hist. nat. Lyon.—Archives du Muséum d'histoire naturelle. Lyon.

Arch. Mus. hist. nat. Paris.—Nouvelles Archives du Muséum d'histoire naturelle. Paris.

Arch. Mus. Rio Jan.—Archives do Museu Nacional do Rio de Janeiro. Brazil.

Arch. Mus. Teyler.—Archives du Musée Teyler. Haarlem.

Arch. Naturges.—Archiv für Naturgeschichte. Berlin.

Arch. Ohrenheilk.—Archiv für Ohrenheilkunde. Leipzig.

Arch. Rassenbiol.—Archiv für Rassen- und Gesellschaftsbiologie, etc. Leipzig.

Arch. Sci. biol.—Archives des Sciences biologiques. Publiées par l'Institut Impérial de Médecine expérimentale à St. Pétersbourg.

Arch. Sci. Méd.—Archives des Sciences Médicales. Organ de l'Institut d'Anatomie et de Chirurgie de Bucarest. Paris.

Arch. Sci. Phys. Nat.—Archives des Sciences physiques et naturelles. Genève.

Arch. wiss. u. prakt. Tierheilk.—Archiv für wissenschaftliche und praktische Tierheilkunde. Berlin.

Arch. Zool. expér.—Archives de Zoologie expérimentale et générale. Paris.

Arkiv Zool.—Arkiv för Zoologi. Utgifvet af k. Svenska Vetenskapsakademien. Upsala and Stockholm.

Årssk. Vetensk.-Soc. Upsala.—Årsskrift, utgiven af kongl. Vetenskaps-Societenten. Upsala.

Asia.—New York.

Asiat. Res.—Asiatic Researches; or Transactions of the Society instituted in Bengal, etc. Calcutta.

Atlant. Jour.—Atlantic Journal and Friend of Knowledge. Philadelphia.

Atti Accad. Lincei.—Atti della R. Accademia dei Lincei. Della Classe di Scienze fisiche, matematiche e naturali. Roma. Consists of Memorie and Rendiconti.

Atti Accad. Pont. Lincei.—Atti dell' Accademia Pontificia dei nuovi Lincei. Roma.

Atti Accad. Sci. Napoli.—Atti dell' Accademia delle Scienze fisiche e matematiche. Napoli.

Atti Accad. Sci. Palermo.—Atti della Reale Accademia di Scienze, Lettere e Belle Arti di Palermo. Palermo.

Atti Accad. Sci. Torino.—Atti della R. Accademia delle Scienze di Torino. Torino.

Atti Soc. Ital. Sci. Nat.—Atti della Società Italiana di Scienze Naturali e del Museo Civili di storia naturale. Milano.

Atti Soc. Nat. Modena.—Atti della Società dei Naturalisti e matematici di Modena. Modena.

Atti Soc. Toscana Sci. Nat.—Atti della Società Toscana di Scienza Naturali residente in Pisa. Pisa.

Augustana Lib. Publ.—Augustana Library Publications. Rock Island, Ill.

Auk.—The Auk: a quarterly Journal of Ornithology. New York.

Aus der Heimat.—Aus der Heimat: Naturwissenschaftliche Monatsschrift. Stuttgart.

Aus der Natur.—Aus der Natur: Zeitschrift für alle Naturfreunde. Leipzig.

Baylor Bull.—Baylor Bulletin. Baylor University. Waco, Texas.

Beitr. Pal. Geol. österr.-Ung.—Beiträge zur Paläontologie und Geologie Österreich-Ungarns und des Orients. Wien.

Ber. Mus. Franc.-Carl. Linz.—Bericht über das Museum Francisco-Carolinum in Linz. Linz, Austria.

Ber. naturf. Ges. Bamberg.—Bericht der naturforschenden Gesellschaft in Bamberg. Bamberg.

Ber. naturf. Ges. Freiburg.—Berichte der naturforschenden Gesellschaft zu Freiburg i. B. Freiburg.

Ber. naturf. Ges. Halle.—Bericht über die Sitzungen der naturforschenden Gesellschaft zu Halle. Halle.

Ber. naturhist. Ver. Augsburg.—Bericht des naturhistorischen Vereins in Augsburg. Augsburg.

Ber. oberrhein. geol. Ver.—Bericht über die Versammlungen des oberrheinischen geologischen Vereins. Stuttgart.

Ber. Senckenb. naturf. Ges.—Bericht über die Senckenbergische naturforschende Gesellschaft in Frankfurt-am-Main.

Ber. St. Gall. naturw. Ges.—Bericht der St. Gallischen naturwissenschaftlichen Gesellschaft. St. Gallen.

Bibl. anat.—Bibliographie anatomique. Paris, Nancy.

Bibl. géol. Russie.—Bibliothèque géologique de la Russie. St. Pétersbourg.

Bibl. Serv. Wistar Inst.—Bibliographic Service of the Wistar Institute of Anatomy and Biology. Abstracts on cards. Philadelphia.

Bibl. Zool.—Bibliographia Zoologica. Leipzig.

Bihang Svenska Vet. Akad. Handl.—Bihang till kongl. Svenska Vetenskaps Akademiens Handlingar. Stockholm.

Bijdr. Anat. Haarlem.—Petrus Camper. Nederlandische Bijdragen tot de Anatomie. Haarlem.

Bijdr. Dierk. Amsterdam.—Bijdragen tot de Dierkunde, etc. Amsterdam.

Biol. Bull.—Biological Bulletin, published by the Marine Biological Laboratory, Woods Hole, Mass.

Biol. Centr. Amer.—Biologia Centrali-Americana. London.

Biol. Centralbl.—Biologisches Centralblatt. Leipzig.

Biol. Foren. Forh.—Biologiska Föreningens Förhandlingar. Verhandlungen des biologischen Vereins in Stockholm.

Biol. Gen.—Biologia Generalis. International journal of general biology. Vienna, Bratislava, Baltimore.

Biol. Lect. Woods Hole.—Biological lectures from the Marine Biological Laboratory. Woods Hole, Massachusetts. Boston.

Biol. Zeitschr. Moscow.—Biologische Zeitschrift. Moscow.

Biol. Zentralbl.—See Biol. Centralbl.

Bol. Acad. Cien. Córdoba.—Boletín de la Academia nacional de Ciencias en Córdoba (República Argentina). Buenos Aires.

Bol. Com. geol. Ital.—Bollettino del R. Comitato geologico d'Italia. Roma.

Bol. Direc. Estud. Biolog.—Boletín de la Dirección de Estudios Biológicos. México.

Bol. Inst. Geol. Méx.—Boletín del Instituto Geológico de México. City of Mexico.

Bol. Mus. nat. México.—Boletín del Museo nacional de México. City of Mexico.

Bol. Soc. españ. hist. nat.—Boletín de la R. Sociedad española de historia natural. Madrid.

Bol. Soc. Geogr. Estad. Rep. mex.—Boletín de la Sociedad Geografía y Estadística de la República mexicana. City of Mexico.

Boll. Mus. Zool. Anat. Torino.—Bollettino dei Musei di Zoologia e di Anatomia comparata della R. Università. Torino.

Boll. Soc. geol. Ital.—Bollettino della Società geologica Italiana. Roma.

Boll. Soc. Napoli.—Bollettino della Società di Naturalisti. Napoli.

Boll. Soc. zool. Ital.—Bollettino della Società zoologica Italiana. Roma.

Brit. Dental Jour.—British Dental Journal. The journal of the British Dental Association. London.

Brit. Jour. Dental Sci.—British Journal of Dental Science. London.

Brit. Med. Jour.—British Medical Journal; the journal of the British Medical Association. London.

Bronn's Klass. Ordn.—Bronn's Klassen und Ordnungen des Thierreichs. Leipzig.

Bull. Acad. Sci. Belgique.—Bulletins de l'Académie royale des Sciences, des Lettres et des Beaux-Arts de Belgique. Bruxelles.

Bull. Acad. Sci. Cracovie.—Bulletin international de l'Académie des Sciences de Cracovie. Comptes-rendus des séances; also designated as Anzeiger der Akademie der Wissenschaften in Krakau. Cracovie.

Bull. Acad. Sci. Russ.—Bulletin de l'Académie des Sciences de Russie. Leningrad.

Bull. Acad. Sci. St. Pétersb.—Izvyestiya imperatorskoi akademii nauk (Bulletin de l'Académie impériale des Sciences de St. Pétersbourg).

Bull. Amer. Mus. Nat. Hist.—Bulletin of American Museum of Natural History. New York.

Bull. Amer. Pal.—Bulletins of American Paleontology, Cornell University. Ithaca.
Bull. Assoc. Sci. France.—Bulletin de l'Association Scientifique de France.
Bull. Brit. Ornith. Club.—Bulletin of British Ornithologists' Club. London.
Bull. Buffalo Soc. Nat. Sci.—Bulletin of Buffalo Society of Natural Sciences. Buffalo.
Bull. Calif. Acad. Sci.—Bulletin of California Academy of Sciences. San Francisco.
Bull. Chicago Acad. Sci.—Bulletin of Chicago Academy of Sciences. Chicago.
Bull. Com. géol. St. Pétersb.—Bulletin du Comité géologique de St. Pétersbourg. Petrograd.
Bull. Conn. Geol. Nat. Hist. Surv.—Bulletin of Geological and Natural History Survey of Connecticut. Hartford.
Bull. Cornell Univ. Sci.—Bulletin of Cornell University. (Science.) Ithaca.
Bull. Dept. Geol. Univ. Calif.—University of California publications. Bulletin of Department of Geology. Berkeley.
Bull. Essex Inst.—Bulletin of Essex Institute. Salem, Mass.
Bull. Géol. Caen.—Bulletin du Laboratoire de Géologie de la Faculté des Sciences de Caen. Caen.
Bull. Geol. Instn. Upsala.—Bulletin of Geological Institution of the University of Upsala. Upsala.
Bull. Geol. Soc. Amer.—Bulletin of Geological Society of America. New York.
Bull. Geol. Surv. Alabama.—Geological Survey of Alabama. Bulletins. Montgomery.
Bull. Geol. Surv. Georgia.—Geological Survey of Georgia. Bulletins. Atlanta.
Bull. Geol. Surv. Minnesota.—Bulletins. Geological and Natural History Survey of Minnesota. Minneapolis.
Bull. Geol. Surv. Missouri.—Geological Survey of Missouri. Bulletins. Jefferson City.
Bull. Geol. Surv. New Jersey.—Geological Survey of New Jersey. Bulletins. Trenton.
Bull. Geol. Surv. Ohio.—Geological Survey of Ohio. Bulletins. Columbus.
Bull. Geol. Surv. Victoria.—Victoria, Department of Mines. Bulletins of the Geological Survey of Victoria. Melbourne.
Bull. Ill. Mus. Nat. Hist.—Bulletin of Illinois State Museum of Natural History. Springfield.
Bull. internat. Acad. Sci. Cracovie.—Bulletin international de l'Académie des Sciences de Cracovie. Classe des Sciences mathématiques et naturelles. Same as Anzeiger der Akademie der Wissenschaften in Krakau. Cracovie.
Bull. internat. Acad. Sci. Prague.—Bulletin international de l'Académie des Sciences. Classe des Sciences mathématiques, naturelles, etc. Prague.
Bull. Lab. Nat. Hist. Iowa.—Bulletins from Laboratories of Natural History of State University of Iowa. Iowa City.
Bull. Liverpool Mus.—Bulletin of Liverpool Museums. Liverpool.
Bull. Mém. Soc. Anthrop.—Bulletins et Mémoires de la Société d'Anthropologie de Paris. Paris.
Bull. Min. Acad. Sci.—Bulletin of Minnesota Academy of Natural Sciences. Minneapolis.
Bull. Mus. Comp. Zool.—Bulletin of Museum of Comparative Zoology at Harvard College. Cambridge.
Bull. Mus. hist. nat. Paris.—Bulletin du Muséum d'histoire naturelle. Paris.
Bull. Mus. Roy. hist. nat. Belgique.—Bulletin du Musée d'histoire naturelle de Belgique. Bruxelles.
Bull. N. Y. State Mus.—Bulletin of New York State Museum of Natural History. Albany.
Bull. N. Y. Zool. Soc.—Bulletin of New York Zoological Society. New York.

Bull. Nat. Hist. Soc. N. Brunsw.—Bulletin of Natural History Society of New Brunswick. St. John.

Bull. Neb. State Mus.—Bulletin of Nebraska State Museum. Lincoln.

Bull. Peabody Mus. Nat. Hist.—Bulletin of Peabody Museum of Natural History. New Haven.

Bull. Phillips Acad.—Bulletin of Department of Archæology of Phillips Academy. Andover.

Bull. Philos. Soc. Wash.—Bulletin of Philosophical Society of Washington. Washington.

Bull. Proc. Nat. Instn. Prom. Sci.—Bulletin of Proceedings of the National Institution for Promotion of Science. Washington.

Bull. S. Carol. Geol. Surv.—Bulletin of South Carolina Geological Survey. Columbia.

Bull. S. Dakota Geol. Surv.—South Dakota Geological Survey. Bulletin. Vermilion.

Bull. S. Dakota Sch. Mines.—South Dakota School of Mines. Department of Geology. Bulletin. Rapid City.

Bull. Sch. Mines Colorado.—Bulletin of Colorado School of Mines. Golden.

Bull. Sci. France Belgique.—Bulletin scientifique de la France et de la Belgique. Paris.

Bull. Sci. Lab. Denison Univ.—Bulletin of Scientific Laboratories of Denison University. Granville.

Bull. Sci. Soc. S. Antonio.—Bulletin of Scientific Society of San Antonio, Texas. San Antonio.

Bull. So. Calif. Acad. Sci.—Bulletin of Southern California Academy of Science. Los Angeles.

Bull. Soc. belge Géol.—Bulletin de la Société belge de Géologie, de Paléontologie et d'Hydrologie. (Consists of Procès-verb. and Mémoires.) Bruxelles.

Bull. Soc. géol. Belgique.—(Included in Ann. Soc. géol. Belgique, q. v.)

Bull. Soc. géol. France.—Bulletin de la Société géologique de France. Paris.

Bull. Soc. géol. Normandie.—Bulletin de la Société géologique de Normandie. Havre.

Bull. Soc. Linn. Nord France.—Bulletin de la Société Linnéenne du Nord de la France. Amiens.

Bull. Soc. Natural. Moscou.—Bulletin de la Société impériale des Naturalistes de Moscou. Moscou.

Bull. Soc. Philom. Paris.—Bulletin de la Société Philomatique de Paris. (Includes Comptes-rendus.) Paris.

Bull. Soc. Sci. Linn.—Bulletin de la Société royale Linnéenne. Bruxelles.

Bull. Soc. Sci. nat. Ekat.—Bulletin de la Société ouralienne d'amateurs des Sciences naturelles. Ekaterinburg.

Bull. Soc. Sci. nat. Elbeuf.—Bulletin de la Société d'Études des Sciences naturelles d'Elbeuf.

Bull. Soc. Sci. nat. Neuchâtel.—Bulletin de la Société des Sciences naturelles de Neuchâtel.

Bull. Soc. vaud. Sci. nat.—Bulletin de la Société vaudoise des Sciences naturelles. Lausanne.

Bull. Soc. Zool. France.—Bulletin de la Société Zoologique de France. Paris.

Bull. U. S. Bur. Fish.—Bulletin of United States Bureau of Fisheries. Washington.

Bull. U. S. Dept. Agric. Biol.—U. S. Department of Agriculture. Division of Biological Survey. Washington.

Bull. U. S. Fish Comm.—Bulletin of United States Fish Commission. Washington.

Bull. U. S. Geol. Geog. Surv. Terrs. Hayden.—Bulletin of United States Geological and Geographical Survey of the Territories. F. V. Hayden. Washington.

Bull. U. S. Geol. Surv.—Bulletin of United States Geological Survey. Washington.
Bull. U. S. Nat. Mus.—Bulletin of United States National Museum. Washington.
Bull. Univ. Alberta, Dept. Geol.—Bulletin of University of Alberta, Department of Geology. Edmonton.
Bull. Univ. Kansas.—Bulletin of University of Kansas. Lawrence.
Bull. Univ. Montana.—Bulletin of University of Montana. Missoula.
Bull. Univ. Oregon.—Bulletin of Oregon University. Eugene.
Bull. Univ. Texas.—Bulletin of University of Texas. Austin.
Bull. Victoria Mem. Mus. Canada.—Bulletin of Victoria Memorial Museum, Canada. Ottawa.
Bull. Washburn Lab. Nat. Hist.—Bulletin of Washburn Laboratory of Natural History. Topeka.
Bull. Wis. Geol. Nat. Hist. Surv.—Wisconsin Geological and Natural History Survey. Bulletin. Scientific Series. Madison.
Bull. Wis. Nat. Hist. Soc.—Bulletin of Wisconsin Natural History Society. Milwaukee.
Bull. Zool. Soc. N. Y.—News Bulletin of Zoological Society. New York.
Bur. Amer. Ethnol. Bull.—Bureau of American Ethnology. Bulletins. Washington.
Bur. Amer. Ethnol., Rep.—Annual report of Bureau of American Ethnology. Smithsonian Institution. Washington.
Cambridge Nat. Hist.—The Cambridge Natural History. Edited by Harmer and Shiply. 10 vols. London.
Can. Geol. Surv.—Geological Survey of Canada. Department (Section) of Mines. Ottawa.
Canad. Field-Naturalist.—The Canadian Field-Naturalist. Ottawa.
Canad. Natural. Geol.—Canadian Naturalist and Geologist. Montreal.
Canad. Natural. Quart. Jour. Sci.—The Canadian Naturalist and Quarterly Journal of Science. Cited also as Canadian Naturalist. Montreal.
Canad. Rec. Sci.—The Canadian Record of Science, including the proceedings of the Natural History Society of Montreal. Montreal.
Cent. Mag.—The Century illustrated monthly Magazine. New York.
Centralbl. Min. Geol. Pal.—Centralblatt für Mineralogie, Geologie und Palaeontologie; in Verbindung mit dem Neuen Jahrbuch für Mineralogie, Geologie und Palaeontologie. Stuttgart.
Chall. Rep. Zool.—Report of the scientific results of the voyage of H. M. S. *Challenger* during the years 1873–76. London.
Christ. Albr. Univ. Kiel.—Christian-Albrechts-Universität. Kiel.
Coll. Yale Univ.—Collections of Yale University. New Haven.
Colorado Coll. Stud.—Colorado College Studies. Papers read before the Colorado College Scientific Society. Colorado Springs.
Com. Mus. Nac. Buenos Aires.—Comunicaciones de Museo nacional de Historia natural. Buenos Aires.
C. R. Acad. Sci. Paris.—Comptes-rendus hebdomadaires des séances de l'Académie des Sciences. Paris.
C. R. Assoc. Anatomistes.—Comptes-rendus de l'Association des Anatomistes. Places of meeting change. France.
C. R. Assoc. franç. Avanc. Sci.—Comptes-rendus de l'Association française pour l'avancement des Sciences. Paris.
C. R. Congr. internat. Géol.—Comptes-rendus du Congrès international de Géologie. Places of meeting change.
C. R. Congr. internat. Méd.—Comptes-rendus du Congrès international de Médecine. Places of publication change.
C. R. Congr. internat. Zool.—Compte-rendu des Séances du Congrès international de Zoologie. See Proceedings and Verhandlungen. Places of meeting change.

C. R. Soc. Biol.—Comptes-rendus hebdomadaires des Séances et Mémoires de la Société de Biologie. Paris.

C. R. Soc. géol. France.—Compte-rendu des Séances de la Société géologique de France. Paris.

C. R. Soc. Helvét.—Archives des Sciences physiques et naturelles. Compte-rendu des travaux de la Société Helvétique des Sciences naturelles. Genève.

C. R. Soc. philom. Paris.—Comptes-rendus sommaires de la Société philomatique de Paris.

Condor.—The Condor. A magazine of western Ornithology. Berkeley.

Contrib. Canad. Pal.—Contributions to Canadian Palæontology. Montreal, Ottawa.

Contrib. Mus. Geol. Univ. Mich.—Contributions from Museum of Geology, University of Michigan. Ann Arbor.

Contrib. Walker Mus.—Contributions to Walker Museum, University of Chicago. Chicago.

Copeia.—Published to advance the science of cold-blooded vertebrates. New York.

Corresp.-Bl. deutsch. Ges. Anthrop.—Correspondenzblatt der deutschen Gesellschaft für Anthropologie. Braunschweig.

Corresp.-Bl. Zahnärzte.—Correspondenzblatt für Zahnärzte. Berlin.

Dana Comm. Lectures.—Dana Commemoration Lectures. New Haven.

Dansk ornith. For. Tidsskr.—Dansk ornithologisk Forenings Tidsskrift. Copenhagen.

Danske Vidensk. Afhandl.—Det kongelige Danske Videnskabernes Selskabs naturvidenskabelige og mathematiske Afhandlinger. Copenhagen.

Danske Vidensk. Selsk. Biol. Medd.—Det kongelige Danske Videnskabernes Selskabs. Biologiske Meddelelser. Copenhagen.

Danske Vidensk. Selsk. Forh. Overs.—Oversigt over det kongelige Danske Videnskabernes Selskabs Forhandlinger. Copenhagen.

Danske Vidensk. Selsk. Skr.—Det kongelige Danske Videnskabernes Selskabs Skrifter. Naturvidenskabelige og mathematiske Afdeling. Copenhagen.

Denk. Akad. Wiss. Wien.—Denkschriften der kaiserlichen Akademie der Wissenschaften zu Wien. Math.-naturhist. Cl. Wien.

Denk. med.-naturw. Ges. Jena.—Denkschriften der medicinisch-naturwissenschaftlichen Gesellschaft. Jena.

Denk. Schweiz. Ges. Naturw.—Neue Denkschriften der allgemeinen Schweizerischen Gesellschaft für die gesammten Naturwissenschaften. Also called: Nouveaux Mémoires de la Société Helvétique des Sciences naturelles. Zürich.

Deutsche Monatsschr. Zahnheilk.—Deutsche Monatsschrift für Zahnheilkunde. Organ des Central-Vereins deutscher Zahnärzte. Berlin.

Deutsches Arch. Physiol.—Deutsches Archiv für die Physiologie. Halle und Berlin.

Diag. N. A. Mamm.—Diagnoses of North American Mammals. Washington.

Discovery.—New York.

E. Mus. Lund.—Samling af Afhandlinger. E. Museo Lundii. Copenhagen.

Eclogæ geol. Helvetiæ.—Eclogæ geologicæ Helvetiæ. Lausanne.

Econom. Geol.—Economic Geology. Lancaster, Pa.

Edinb. Jour. Sci.—The Edinburgh Journal of Science. Edinburgh.

Edinb. New Philos. Jour.—Edinburgh New Philosophical Journal. Edinburgh.

Edinb. New Philos. Mag.—Edinburgh New Philosophical Magazine. Edinburgh.

Emu.—The Emu. Official organ of Australasian Ornithologists' Union. Melbourne.

Encyclop. Brit.—The Encyclopædia Britannica. Cambridge, England.

Encyclop. Méthod. Syst. Anat.—Encyclopédie Méthodique. Système Anatomique. Paris.

Fauna arctica.—Fauna arctica: eine Zusammenstellung der arktischen Tierformen. Jena.

Fauna Flora, Upsala.—Fauna och Flora: Populär Tidsskrift for Biologie. Upsala and Stockholm.

Festschr. 3. Saecularfeier A. J. Maxim.—Festschrift zur dritten Saecularfeier der Alma Julia Maximiliana. Gewidmet von der medicinischen Facultät. Würzburg.

Festschr. 350-jähr. Jubelf. Thüring. Univ.—Festschrift zur 350-jährigen Jubelfeier der Thüringer Universität. Jena.

Field.—The Field. London.

Field Columb. Mus. Geol.—Field Columbian Museum Publications. Geological Series. Chicago.

Field Columb. Mus. Zool.—Field Columbian Museum Publications. Zoological Series. Chicago.

Field Mus. Nat. Hist. Geol.—Field Museum Natural History. Geological Series. Chicago.

Final Rep. Geol. Surv. Minn.—Final report of Geological Survey of Minnesota. Minneapolis.

Földt. Közl.—Földtani Közlöny. Geologische Mittheilungen. Zeitschrift der ungarischen Gesellschaft. Budapest.

Folio U. S. Geol. Surv.—United States Geological Survey. Geologic Folio. Washington.

Forest and Stream.—New York.

Fortschr. Geol. Pal.—Fortschritte der Geologie und Palaeontologie. Berlin.

Froriep's Notizen.—Neue Notizen aus dem Gebiete der Natur und Heilkunde gesammelt und mitgetheilt von Ludwig Friederich v. Froriep und Dr. Robert Froriep. Weimar.

Froriep's Tagsber.—Tagsberichte über die Fortschritte der Natur und Heilkunde. Abtheilung für Zoologie und Palaeontologie. Weimar.

Gelehrte Anz. Bayer. Akad.—Gelehrte Anzeigen. Bayerische Akademie. München.

Geognost. Jahresh.—Geognostische Jahreshefte; herausgegeben von der geognostischen Abteilung des k. bayer. Oberbergamtes in München.

Geol. Centralbl.—Geologisches Centralblatt: Anzeiger für Geologie, Petrographie, Palaeontologie und verwandte Wissenschaften. Leipzig.

Geol. Mag.—The Geological Magazine, or Monthly Journal of Geology; with which is incorporated "The Geologist." New series. London.

Geol. Pal. Abh. Jena.—Geologische und Palaeontologische Abhandlungen. E. Koken. Jena.

Geol. Soc. Amer. Prelim. lists.—Geological Society of America. Preliminary lists of titles and abstracts to be offered at the meetings.

Geol. Surv. Ala.—Reports of Geological Survey of Alabama. Montgomery.

Geol. Surv. Ill.—Geological Survey of Illinois, Springfield. Also Illinois State Geological Survey. Urbana.

Geol. Surv. Ind.—Geological Survey of Indiana; also reports of Department of Geology and Natural History; of Bureau of Statistics and Geology; Department of Geology and Natural Resources. Indianapolis.

Geol. Surv. Michigan.—Geological Survey of Michigan. Lansing.

Geol. Surv. Missouri.—Reports of Geological Survey of the State of Missouri. Jefferson City.

Geol. Surv. N. Carolina.—Reports of Geological Survey of North Carolina. Raleigh.

Geol. Surv. New York.—Reports of various State Geologists. Albany.

Geol. Surv. Nigeria.—Geological Survey of Nigeria.

Geol. Surv. Ohio.—Reports of Geological Survey of Ohio. Columbus.

Geol. Surv. Penn.—Reports of Geological Survey of Pennsylvania. Harrisburg.

Geol. Surv. Texas.—Reports of Geological Survey of Texas. Austin.

Geol. Surv. Wisconsin.—Reports of Geological Survey of Wisconsin. Madison.

Geol. Zentralbl.—See Geol. Centralbl.

Geologist.—The Geologist. London.

Gior. Sci. nat. econ. Palermo.—Giornale di Scienze naturali ed economiche. Palermo.

Globus.—Illustrierte Zeitschrift für Länder- und Völkerkunde. Braunschweig.

Guide to Nature.—The Guide to Nature, Education, and Recreation. Stamford, Conn.

Handel. Ned. Nat. Geneesk. Congr.—Handelingen van het Nederlandsch Natuur- en Geneeskundig Congres.

Harper's Month. Mag.—Harper's Monthly Magazine. New York.

Harper's New Month. Mag.—Harper's New Monthly Magazine. New York.

Harvey Lect.—Harvey Lectures. Philadelphia, London.

Hertwig's Handb. vergl. exper. Entwickelungsl. Wirbelt.—Hertwig's Handbuch der vergleichenden und experimentalen Entwickelungslehre der Wirbeltiere. 8vo. Jena.

Ibis.—The Ibis: a quarterly Journal of Ornithology. London.

Ichth. Ohien.—Ichthyologia Ohiensis, or Natural history of the fishes inhabiting the River Ohio and its tributary streams. 8vo. Lexington, Ky., 1820.

Ill. Biol. Monogr.—Illinois Biological Monographs. Published by the University of Illinois. Urbana.

Internat. Amerikanisten-Kongr.—Internationaler Amerikanisten-Kongress. Same as below. Places of meeting change.

Internat. Congr. Americanists.—International Congress of Americanists. Same as above.

Internat. Geol.-Congr.—See C. R. Congr. internat. Géol.

Internat. Jour. Anat. Physiol.—Monthly international Journal of Anatomy and Physiology. Also issued as: Journal international d'anatomie et de physiologie; and as: Internationale Monatsschrift für Anatomie und Histologie. Paris, Leipzig, London.

Internat. Jour. Orthodon.—The international Journal of Orthodontia. St. Louis.

Internat. Monatsschr. Anat. Physiol.—Internationale Monatsschrift für Anatomie und Physiologie. Leipzig.

Internat. Ornith. Congr.—International Ornithological Congress. Places of meeting change.

Internat. Rev. Hydrobiol. Hydrogr.—International Revue der gesamten Hydrobiologie und Hydrographie. Leipzig.

Iowa Geol. Surv.—Annual reports of Iowa Geological Survey. Des Moines.

Irish Naturalist.—The Irish Naturalist. Dublin.

Isis von Oken.—Isis (oder Encyclopädische Zeitung). Published by L. Oken. Jena.

Jahrb. geol. Landesanst. Berlin.—Jahrbuch der königlich-preussischen geologischen Landesanstalt und Bergakademie zu Berlin.

Jahrb. geol. Reichsanst. Wien.—Jahrbuch der kaiserlich-königlichen geologischen Reichsanstalt. Wien.

Jahrb. Min. Geogn. Geol.—Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefactenkunde. Stuttgart.

Jahrb. Min. Geol. Pal.—Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. With also Beilage-Band. Stuttgart.

Jahrb. Nassau. Ver. Naturk.—Jahrbuch des Nassauischen Vereins für Naturkunde. Wiesbaden.

Jahrb. St. Gallisch. naturw. Ges.—Jahrbuch der St. Gallischen naturwissenschaftlichen Gesellschaft. St. Gallen.

Jahrb. Wiss. Tierzucht.—Jahrbuch für wissenschaftliche und praktische Tierzucht. Hannover.

Jahresber. Anat. Entwickl.—Jahresberichte über die Fortschritte der Anatomie und Entwicklungsgeschichte. Jena.

Jahresber. böhm. Ges. Wiss.—Jahresbericht der königlich-böhmischen Gesellschaft der Wissenschaften. Prag.

Jahresber. niedersächs. geol. Ver.—Jahresbericht des niedersächsischen geologischen Vereins. Geologisches. Hannover.

Jahresber. ornith. Ver. München.—Jahresbericht des ornithologischen Vereins München. München.

Jahresber. schles. Ges. vaterl. Kult.—Jahresbericht der schlesischen Gesellschaft für vaterländische Kultur. Breslau.

Jahresber. Ver. Naturwiss. Braunsch.—Jahresbericht des Vereins für Naturwissenschaft zu Braunschweig. Braunschweig.

Jahresh. Ver. Naturk. Württemb.—Jahreshefte des Vereins für vaterländische Naturkunde in Württemberg. Stuttgart.

Jena. Zeitschr. Naturwiss.—Jenaische Zeitschrift für Naturwissenschaft. Jena.

Johns Hopkins Univ. Circ.—Johns Hopkins University Circulars. Baltimore.

Johns Hopkins Univ. Stud.—Johns Hopkins University Studies from Biological Laboratory. Baltimore.

Jour. Acad. Nat. Sci. Phila.—Journal of Academy of Natural Sciences of Philadelphia. Philadelphia.

Jour. Agric. Res.—Journal of Agricultural Research. Washington.

Jour. Amer. Med. Assoc.—Journal of American Medical Association. Chicago.

Jour. Amer. Mus. Nat. Hist.—Journal of American Museum of Natural History. New York.

Jour. Anat. Lond.—The Journal of Anatomy. Originally The Journal of Anatomy and Physiology. London.

Jour. Anat. Physiol. Lond.—The Journal of Anatomy and Physiology, Normal and Pathological. London.

Jour. Anat. Physiol. Paris.—Journal de l'Anatomie et de la Physiologie normales et pathologiques de l'homme et des animaux. Paris.

Jour. Asiat. Soc. Bengal.—Journal of Asiatic Society of Bengal. Calcutta.

Jour. Cincinnati Soc. Nat. Hist.—Journal of Cincinnati Society of Natural History. Cincinnati.

Jour. Coll. Sci. Tokyo.—Journal of College of Science, Imp. University of Tokyo. Tokyo.

Jour. Comp. Med. Surg.—Journal of Comparative Medicine and Surgery. Philadelphia.

Jour. Comp. Neur.—Journal of Comparative Neurology. Granville, Ohio.

Jour. Elisha Mitchell Sci. Soc.—Journal of Elisha Mitchell Scientific Society. Chapel Hill, N. C.

Jour. Franklin Inst.—Journal of Franklin Institute. Philadelphia.

Jour. Geol.—The Journal of Geology. A semi-quarterly Magazine of Geology and related Sciences. Chicago.

Jour. Geol. Soc. Tokyo.—The Journal of Geological Society of Tokyo. Tokyo.

Jour. Internat. Anat.—Journal international d'anatomie et de physiologie. (See Internat. Jour. Anat. Physiol.)

Jour. Linn. Soc. Zool.—Journal of Linnean Society: Zoology. London.

Jour. Liverp. Geol. Assoc.—Liverpool Geological Association: Journal. Liverpool.

Jour. Mamm.—Journal of Mammalogy. Published quarterly by American Society of Mammalogists. Baltimore.

Jour. Mar. Biol. Assoc. U. K.—Journal of Marine Biological Association of the United Kingdom. Plymouth.

Jour. Morphol.—Journal of Morphology. Later called Journal of Morphology and Physiology. Philadelphia.

Jour. Ornith.—Journal für Ornithologie. Deutsches Centralorgan für die gesammte Ornithologie. Leipzig.

Jour. Phys. Chim. Hist. nat.—Journal de Physique, de Chimie et d'Histoire naturelle. Paris.

Jour. Proc. Roy. Soc. N. S. Wales.—Journal and Proceedings of Royal Society of New South Wales. Sidney.

Jour. Roy. Geol. Soc. Ireland.—Journal of Royal Geological Society of Ireland. Dublin, London.

Jour. Roy. Micr. Soc.—Journal of Royal Microscopical Society. London.

Jour. Victoria Inst.—Journal of transactions of Victoria Institute, or Philosophical Society of Great Britain. London.

Jour. Wash. Acad. Sci.—Journal of Washington Academy of Sciences. Washington.

Jour. Zool. Paris.—Journal de Zoologie. Paris.

Jour. Zool. Res.—Journal of Zoological Research. London.

K. svenska Vetensk. Akad. Handl.—Kongliga svenska Vetenskapsakademiens. Upsala, Stockholm.

Kansas City Rev. Sci. Indust.—The Kansas City Review of Science and Industry. Kansas City, Missouri.

Kansas Univ. Quart.—Kansas University Quarterly. Lawrence.

Kansas Univ. Sci. Bull.—The Kansas University Science Bulletin. Lawrence.

Kent Scient. Inst. Misc. Pap.—Kent Scientific Institute, Miscellaneous Papers. Grand Rapids.

Knowl. Scient. News.—Knowledge and Scientific News. London.

Knowledge.—An illustrated magazine of Science. London.

Korresp.-Bl. deutsch. Ges. Anthrop.—Korrespondenzblatt der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte. Braunschweig.

Korresp.-Bl. Ver. Riga.—Korrespondenzblatt des Naturforscher-Vereins. Riga.

La Géographie.—Bulletin de la Société de Géographie. Paris.

La Nature.—Revue des Sciences. Paris.

Lancet.—The Lancet. A journal of British and foreign medicine, surgery, etc. London.

L'Anthrop. Paris.—L'Anthropologie. Paris.

Le Naturaliste.—Revue illustrée des sciences naturelles. Paris.

Leopoldina.—Amtliches Organ der kaiserlichen Leopoldino-Carolinischen deutschen Akademie der Naturforscher. Halle.

L'Institut.—Journal des Académies et Sociétés scientifiques de la France et de l'étranger. Paris.

Lloyd's Nat. Hist. Ser.—Lloyd's Natural History Series. Edited by Bowler Sharpe. London.

Lond. Edinb. Dublin Philos. Mag.—The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science. London.

Lond. Edinb. Philos. Mag.—The London and Edinburgh Philosophical Magazine and Journal of Science.

Lond. Med. Reposit.—London Medical Repository. London.

Los Angeles Mus. Hist. Sci. Publ.—Publications of the Los Angeles County Museum of History, Science and Art. Los Angeles.

Lund. Univ. Årsskr.—Lunds Universitets Årsskrift. Lund. (See also Acta Univ. Lund.)

Mag. Nat. Hist.—The Magazine of Natural History. London.

Magyar Föld. int. evkön.—A Magyar Kiralyi Földtani intézet evkönyve. (Annals of the Hungarian Royal Geological Bureau.) Budapest.

Marine Biol. Lab. Woods Hole, Lectures.—Marine Biological Laboratory of Woods Hole. Lectures. Boston, London.

Maryland Geol. Surv.—Maryland Geological Survey. Baltimore.

Math. naturw. Ber. Ungarn.—Mathematische und naturwissenschaftliche Berichte aus Ungarn, etc. Leipzig.

McClure's Mag.—McClure's Magazine. New York.

Med. Phys. Jour. Lond.—Medical and Physical Journal. London.

Med. Record, N. Y.—The Medical Record. A semi-monthly Journal of medicine and surgery. New York.

Med. Reposit. N. Y.—The Medical Repository. New York.

Med. Times and Gazette.—Medical Times and Gazette. London.

Meddelelser om Grönland.—Copenhagen.

Mél. biol.—Mélanges biologiques. (Reprints from Bulletin Acad. St. Petersburg.)

Mém. Acad. Sci. Belgique.—Mémoires de l'Académie des Sciences et des Beaux-Arts de Belgique. Bruxelles.

Mém. Acad. Sci. France.—Mémoires de l'Académie des Sciences de l'Institut de France. Paris.

Mém. Acad. Sci. Lett. Montpellier.—Mémoires de la Section de l'Académie des Sciences et Lettres de Montpellier.

Mém. Acad. Sci. Lyon.—Mémoires de l'Académie des Sciences, Belles-Lettres et Arts de Lyon. Lyon.

Mém. Acad. Sci. St. Pétersb.—Zapiski imperatorskoi akademii nauk. (Mémoires de l'Académie impériale des Sciences de Saint-Pétersbourg.) St. Pétersbourg.

Mém. Acad. Sci. Toulouse.—Mémoires de l'Académie des Sciences de Toulouse. Toulouse.

Mem. Accad. Agric. Verona.—Memorie della Accademia d'Agricoltura, Commercio ed Arti. Verona.

Mem. Accad. Lincei.—Atti della R. Accademia dei Lincei. Memorie della classe di Scienze fisiche, mathematiche e naturali. Roma.

Mem. Accad. Pont. Lincei.—Memorie della Pontificia Accademia dei nuovi Lincei. Roma.

Mem. Accad. Sci. Bologna.—Memorie della R. Accademia delle Scienze dell'Instituto di Bologna. Bologna.

Mem. Accad. Sci. Torino.—Memorie della Reale Accademia delle Scienze di Torino.

Mem. Amer. Acad. Arts, Sci.—Memoirs of American Academy of Arts and Sciences. Cambridge, Mass.

Mem. Amer. Mus. Nat. Hist.—Memoirs of American Museum of Natural History. New York.

Mem. Boston Soc. Nat. Hist.—Memoirs of Boston Society of Natural History. Boston.

Mem. Brooklyn Inst. Arts, Sci.—The Museum of Brooklyn Institute of Arts and Sciences. Memoirs of Natural Sciences. Brooklyn.

Mem. Calif. Acad. Sci.—Memoirs of California Academy of Sciences. San Francisco.

Mem. Carnegie Mus.—Memoirs of Carnegie Museum. Pittsburgh.

Mém. Com. Géol. St. Pétersbourg.—Mémoires du Comité Géologique. St. Pétersbourg.

Mem. Conn. Acad. Sci.—Memoirs of Connecticut Academy of Arts and Sciences. New Haven.

Mém. Cour. Acad. Belgique.—Mémoires couronnés et Mémoires des Savants étrangers publiés par l'Académie Royale des Sciences des Lettres et des Beaux-Arts de Belgique. Bruxelles.

Mem. Geol. Surv. Eng. Wales.—Memoirs of Geological Survey. England and Wales. London.

Mem. Geol. Surv. India.—Memoirs of Geological Survey of India. Palæontologia Indica. Calcutta.

Mem. Geol. Surv. N. S. Wales.—Memoirs of Geological Survey of New South Wales. Sydney.

Mem. Geol. Surv. U. K.—Memoirs of the Geological Survey of the United Kingdom. London.

Mem. Geol. Surv. Victoria.—Victoria. Department of Mines. Memoirs of Geological Survey of Victoria. Melbourne.

Mem. Ist. Geol. Univ. Padova.—Memorie dell' Istituto Geologico della R. Università di Padova. Italy.

Mem. Ist. Venezia.—Memorie del Reale Istituto Veneto di Scienze, Lettere e Arti. Venezia.

Mem. Johns Hopkins Univ.—Memoirs from Biological Laboratory of Johns Hopkins University. Baltimore.

Mem. Manchester Soc.—Memoirs and Proceedings of Manchester Literary and Philosophical Society. Manchester.

Mem. Mus. Comp. Zool.—Memoirs of Museum of Comparative Zoology at Harvard College. Cambridge, Mass.

Mém. Mus. hist. nat. Belgique.—Mémoires du Musée royal d'histoire naturelle de Belgique. Bruxelles.

Mém. Mus. hist. nat. Paris.—Mémoires du Muséum d'histoire naturelle. Paris.

Mem. N. Y. Acad. Sci.—New York Academy of Sciences. Memoirs. New York.

Mem. N. Y. State Mus.—Memoirs of New York State Museum. Albany.

Mem. Nat. Acad. Sci. Washington.—Memoirs of National Academy of Sciences. Washington.

Mem. Peabody Acad. Sci.—Memoirs of Peabody Academy of Sciences. Salem.

Mem. Queensl. Mus.—Memoirs of Queensland Museum. Brisbane.

Mém. Soc. acad. Boulogne.—Mémoires de la Société académique de Boulogne-sur-mer. Boulogne-sur-mer.

Mém. Soc. belge Géol.—Bulletin de la Société belge de Géologie, de Paléontologie et d'Hydrologie. (Consists of Procès-verbaux and Mémoires.) Bruxelles.

Mém. Soc. géol. Belgique.—Annales de la Société géologique de Belgique. (Consists of Bulletin and Mémoires.) Liége.

Mém. Soc. géol. France.—Mémoires de la Société géologique de France. Paris.

Mém. Soc. géol. France, Pal.—Mémoires de la Société géologique de France. Paléontologie. Paris.

Mém. Soc. géol. Nord.—Mémoires de la Société géologique du Nord. Lille.

Mém. Soc. hist. nat. Genève.—Mémoires de la Société de physique et d'histoire naturelle de Genève.

Mem. Soc. ital. Sci.—Memorie di matematica e di fisica della Società italiana delle Scienze. Napoli.

Mem. Soc. ital. Sci. Nat.—Memorie della Società italiana di Scienze naturali. Milano.

Mém. Soc. Linn. Nord France.—Mémoires de la Société Linnéenne du Nord de la France. Amiens.

Mém. Soc. Linn. Normandie.—Mémoires de la Société Linnéenne de Normandie. Paris.

Mém. Soc. Nat. Nouv. Russ.—Mémoires de la Société des Naturalistes de la Nouvelle-Russie. Odessa.

Mém. Soc. Natural. Kiew.—Mémoires de la Société des Naturalistes de Kiew. Kiew.

Mém. Soc. Natural. Moscou.—Nouveaux Mémoires de la Société impériale des Naturalistes de Moscou. Moscou.

Mém. Soc. pal. Suisse.—See Abh. schweiz. pal. Ges.

Mém. Soc. Sci. Agr. Lille.—Mémoires de la Société des Sciences de l'Agriculture et des Arts de Lille.

Mém. Soc. Sci. Hainaut.—Mémoires et Publications de la Société des Sciences, des Arts et des Lettres du Hainaut. Mons.

Mém. Soc. Sci. Nat. Neuchâtel.—Mémoires de la Société des Sciences Naturelles de Neuchâtel. Neuchâtel.

Mém. Soc. zool. France.—Mémoires de la Société zoologique de France. Paris.

Mem. Univ. Calif.—Memoirs of University of California. Berkeley.

Metrop. Mag.—Metropolitan Magazine. New York.

Missouri Bur. Geol. Mines.—Missouri Bureau of Geology and Mines. Rolla.

Mitt. Akad. Wiss. Berlin.—Mathematische und naturwissenschaftliche Mittheilungen aus den Sitzungsberichten der königlich-preussischen Akademie der Wissenschaften zu Berlin.

Mitt. Anthrop. Ges. Wien.—Mittheilungen der anthropologischen Gesellschaft in Wien.

Mitt. Geol. Ges. Wien.—Mittheilungen der geologischen Gesellschaft in Wien. Wien.

Mitt. Geol. Landesanst. Elsass-Loth.—Mittheilungen der geologischen Landesanstalt von Elsass-Lothringen. Strassburg.

Mitt. Jahrb. Ungar. Geol. Reichsanst.—Mittheilungen aus dem Jahrbuche der ungarischen geologischen Reichsanstalt. Budapest.

Mitt. med. Facultät kais.-japan. Univ. Tokio.—Mittheilungen aus der medicinischen Facultät der kaiserlich-japanischen Universität zu Tokio. Tokio.

Mitt. Mus. Dresden.—Mittheilungen aus dem königlichen mineralogisch-geologischen und praehistorischen Museum in Dresden. Leipzig.

Mitt. Mus. Naturk. Berlin.—Mittheilungen aus der zoologischen Sammlung des Museums für Naturkunde in Berlin.

Mitt. Nat.-Kab. Stuttgart.—Mittheilungen aus dem königlichen Naturalien-Kabinet zu Stuttgart. Stuttgart.

Mitt. naturf. Ges. Bern.—Mittheilungen der naturforschenden Gesellschaft in Bern. Bern.

Mitt. naturf. Ges. Zürich.—Mittheilungen der naturforschenden Gesellschaft in Zürich. Zürich.

Mitt. Zool. Stat. Neapel.—Mittheilungen aus der zoologischen Station zu Neapel. Berlin.

Mon. U. S. Geol. Surv.—Monographs of United States Geological Survey. Washington.

Monatsber. Akad. Wiss. Berlin.—Monatsberichte der k. p. Akademie der Wissenschaften zu Berlin.

Monatsh. naturw. Unterr.—Monatshefte für den naturwissenschaftlichen Unterricht aller Schulgattungen. Leipzig.

Monatsschr. Ohrenheilk.—Monatsschrift für Ohrenheilkunde sowie für Kehlkopf-Nasen-Rachen-Krankheiten. Berlin.

Month. Amer. Jour. Geol.—Monthly American Journal of Geology and Natural Science. Philadelphia.

Month. Micr. Jour.—The Monthly Microscopical Journal. London.

Morphol. Arbeit.—Morphologische Arbeiten. Jena.

Morphol. Jahrb.—Morphologisches Jahrbuch: eine Zeitschrift für Anatomie und Entwickelungsgeschichte. Leipzig.

Münch. Med. Wochenschr.—Münchener Medizinische Wochenschrift. Organ für amtliche und praktische Ärzte. München.

Mus. Graphic.—Museum Graphic. Los Angeles.

N. A. Fauna.—U. S. Department of Agriculture, Division of Ornithology and Mammalogy. North American Fauna. Washington.

N. Car. Geol. Econ. Surv.—North Carolina Geological and Economic Survey. Raleigh.

N. Y. Times Mag.—Magazine of Sunday issue of New York Times. New York.
N. Zeal. Geol. Surv.—New Zealand Geological Survey. Wellington.
Nat. Geogr. Mag.—National Geographic Magazine. New York.
Nat. Hist.—Natural History. (Continuation of Journal of American Museum of Natural History.) New York.
Nat. Hist. Rev.—Natural History Review. Published quarterly. Dublin and London.
Nat. Sci.—Natural Science. A monthly review of Scientific Progress. London.
Nat. Sci. Prog.—Natural Science Progress. London.
Naturalist.—The Naturalist. A monthly journal of Natural History for north of England. Leeds and London.
Naturalista Sicil.—Il Naturalista Siciliano. Organo della Società Siciliana di Scienze Naturali. Palermo.
Naturaliste canad.—Naturaliste canadien. Quèbec.
Nature.—Nature: a weekly illustrated journal of Science. London.
Nature (La).—La Nature. Revue des Sciences. Paris.
Naturw. Rundschau.—Naturwissenschaftliche Rundschau. Braunschweig.
Naturw. Wochenschr.—Naturwissenschaftliche Wochenschrift. Jena.
Naturwiss. Berlin.—Naturwissenschaften. Wochenschrift für die Fortschritte der Naturwissenschaft, der Medizin und der Technik. Berlin.
Natuurk. Tijdschr. Nederl. Ind.—Natuurkundig Tijdschrift voor Nederlandsch-Indie. Batavia.
Natuurk. Verhand. Haarlem.—Natuurkundige Verhandelingen van de Hollandsche Maatschappig der Wetenschappen te Haarlem. Harlem.
Nautilus.—The Nautilus. Philadelphia.
Neb. Geol. Surv.—Nebraska Geological Survey. Lincoln.
Nederl. Bijdr. Anat.—See Petrus Camper.
Neue Denk. Schweiz. Ges. Naturw.—See Denk. Schweiz. Ges. Naturw. Zürich. Same as Nouveaux Mémoires de la Société helvétique des Sciences naturelles. Zürich.
Neues Jahrb. Min. Geogn. Geol.—Neues Jahrbuch für Mineralogie, Geognosie und Petrefactenkunde. Heidelberg, Stuttgart.
Neues Jahrb. Min. Geol. Pal.—Neues Jahrbuch für Mineralogie, Geologie und Palaeontologie. Stuttgart.
Neues Jahrb. Min. Geol. Pal., Beil.-Bd.—Beilage-Band of the Neues Jahrbuch für Mineralogie, etc. Stuttgart.
Norske Selsk. Skr.—Det Kongelige Norske Videnskabers Selskabs Skrifter. Trondhjem.
Notizbl. Ver. geol. Landesanst. Darmstadt.—Notizblatt des Vereins für Erdkunde und der grossh.-geologischen Landesanstalt zu Darmstadt. Darmstadt.
Nouv. Ann. Mus. hist. nat. Paris.—Nouvelles Annales du Muséum d'histoire naturelle. Paris.
Nouv. Arch. Mus. hist. nat.—Nouvelles Archives du Muséum d'histoire naturelles. Paris.
Nouv. Mém. Acad. Sci. Bruxelles.—Nouveaux Mémoires de l'Académie Royale des Sciences et Belles-Lettres de Bruxelles.
Nouv. Mém. Soc. Helvét. Sci. Nat.—See Denk. Schweiz. Ges. Naturw.
Nouv. Mém. Soc. Nat. Moscou.—Nouveaux Mémoires de la Société Imp. des Naturalistes de Moscou. Moscou.
Nova Acta Acad. Leop. Carol.—See Acta Acad. Leop.-Carol.
Nova Acta Acad. Sci. Petropol.—Nova Acta Academiæ Scientiarum Imperialis Petropolitanæ. St. Petersburg.
Novi Comm. Acad. Sci. Inst. Bonon.—Novi Commentarii Academiæ Scientiarum Instituti Bononensis. Bologna.

Novit. Zoolog.—Novitates Zoologicæ. A journal of Zoology. Tring.

Nyt Mag. Naturv.—Nyt Magazin för Naturvidenskaberne. Christiana.

Occ. Papers Bost. Soc. Nat. Hist.—Occasional Papers of Boston Society of Natural History. Boston.

Occ. Papers Calif. Acad. Sci.—Occasional Papers of California Academy of Sciences. San Francisco.

Occ. Papers Mus. Zool. Univ. Mich.—Occasional Papers of Museum of Zoology, University of Michigan. Ann Arbor.

öfv. Akad. Forh.—öfversigt af k. Vetenskaps-Akademiens. Förhandlingar. Upsala.

Ohio Naturalist.—The Ohio Naturalist. Published by Biological Club of the Ohio State University. Columbus.

Ornith. Centralbl.—Ornithologisches Centralblatt. Organ für Wissenschaft und Praxis. Beiblatt zum Journal für Ornithologie. Leipzig.

Ornith. Jahrb.—Ornithologisches Jahrbuch. Organ für das palaearktische Faunengebiet. Hallein.

Ornith. Monatsber.—Ornithologische Monatsberichte; herausgegeben von Dr. A. Reichenow. Berlin.

Ornith. Monatsschr. Magdeburg.—Ornithologische Monatsschrift. Deutscher Verein zum Schutze der Vogelwelt. Magdeburg.

Ottawa Naturalist.—The Ottawa Naturalist. The Transactions of Ottawa Field Naturalists' Club. Ottawa.

Ov. Danske Selsk.—Oversigt over det kongelige Danske Videnskabernes Selskabs Forhandlinger. Copenhagen. Same as Danske Vidensk. Selsk. Forsh. Overs.

Overland Monthly.—San Francisco.

Palaeobiol.—Palaeobiologica. Wien and Leipzig.

Palaeont. Abh.—Palaeontologische Abhandlungen. Jena.

Palæont. Bull.—Palæontological Bulletins. Issued by E. D. Cope. Philadelphia.

Palaeont. Hungarica.—Palaeontologia Hungarica. Budapest.

Palaeont. Ind.—Palaeontologia Indica. Calcutta.

Palaeont. ital.—Palaeontographia italica. Memorie di Palaeontologia. Pisa.

Palaeont. Sinica.—Palaeontologia Sinica. Geological Survey of China. Pekin.

Palaeont. Zeitschr.—Palaeontologische Zeitschrift. Organ der palaeontologischen Gesellschaft. Berlin.

Palaeontogr.—Palaeontographica. Beiträge zur Naturgeschichte der Vorzeit. Stuttgart.

Palæontogr. Soc. Mon.—Palæontographical Society Monographs. London.

Paléont. franç.—Paléontologie française ou description des fossiles de la France. Paris.

Pan-Amer. Geol.—The Pan-American Geologist. Des Moines.

Pap. Mich. Acad. Sci. Arts.—Papers of Michigan Academy of Science, Arts and Letters. Michigan University.

Pap. Nat. Hist. Soc. Wisc.—Occasional Papers of Natural History Society of Wisconsin. Milwaukee.

Pap. Peabody Mus. Amer. Archæol.—Papers of Peabody Museum of American Archæology and Ethnology. Cambridge.

Petrus Camper, Bijdr. Anat.—Petrus Camper, Nederlandsche Bijdragen tot de Anatomie. Haarlem.

Phil. Mag. Jour. Sci.—The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science. London.

Phil. Trans. Ray Soc.—Philosophical Transactions of the Ray Society. London.

Phil. Trans. Roy. Soc. Lond.—Philosophical Transactions of Royal Society of London. Series B. London.

Phila. Med. and Phys. Jour.—Philadelphia Journal of Medical and Physical Sciences. Philadelphia.

Physis.—Revista de la Sociedad Argentina Naturales. Buenos Aires.

Pop. Sci.—Popular Science. Formerly and later called Popular Science News. New York.

Pop. Sci. Month.—The Popular Science Monthly. New York.

Pop. Sci. News.—See Pop. Sci.

Pop. Sci. Review.—The Popular Science Review. A quarterly, etc. London.

Princeton Univ. Exped. Patagonia.—Reports of Princeton University Expedition to Patagonia. Princeton and Stuttgart.

Proc. Acad. Nat. Sci. Phila.—Proceedings of Academy of Natural Sciences of Philadelphia. Philadelphia.

Proc. Akad. Wet. Amsterdam.—Proceedings of Section of Sciences. Koninklijke Akademie van Wetenschappen. Amsterdam.

Proc. Amer. Acad. Arts Sci.—Proceedings of American Academy of Arts and Sciences. Boston.

Proc. Amer. Assoc. Adv. Sci.—Proceedings of American Association for Advancement of Science. Washington.

Proc. Amer. Micros. Soc.—Proceedings of American Microscopical Society. Washington.

Proc. Amer. Philos. Soc.—Proceedings of American Philosophical Society. Philadelphia.

Proc. Biol. Soc. Wash.—Proceedings of Biological Society of Washington. Washington.

Proc. Birmingh. Nat. Hist. Soc.—Proceedings of Birmingham Natural History and Philosophical Society. Also cited as Proc. Birmingham Philos. Soc. Birmingham.

Proc. Bost. Soc. Nat. Hist.—Proceedings of Boston Society of Natural History. Boston.

Proc. Calif. Acad. Sci.—Proceedings of California Academy of Sciences. Zoology, Geology. San Francisco.

Proc. Cambridge Philos. Soc.—Proceedings of Philosophical Society, Cambridge. Cambridge.

Proc. Canad. Inst.—Proceedings of Canadian Institute. Toronto.

Proc. Col. Mus. Nat. Hist.—Proceedings of Colorado Museum of Natural History. Denver.

Proc. Col. Sci. Soc.—Proceedings of Colorado Scientific Society. Denver.

Proc. Davenport Acad. Sci.—Proceedings of Davenport Academy of Natural Sciences. Davenport.

Proc. Delaware Co. Inst. Sci.—Proceedings of Delaware County (Penn.) Institute of Science. Media.

Proc. Dorset Nat. Hist. Antiquar. Field Club.—Proceedings Dorset Natural History and Antiquarian Field Club. Dorchester.

Proc. Elliott Soc. Nat. Hist.—Proceedings of Elliott Society of Natural History. Charleston, S. C.

Proc. Essex Inst.—Proceedings of Essex Institute. Salem, Mass.

Proc. Geol. Assoc.—Proceedings of Geologists' Association. London.

Proc. Geol. Soc. Lond.—Abstracts of Proceedings of Geological Society of London. London.

Proc. Indiana Acad. Sci.—Proceedings of Indiana Academy of Science. Indianapolis.

Proc. Internat. Zool. Congr.—Proceedings of International Zoological Congress. Places of meeting change.

Proc. Iowa Acad. Sci.—Proceedings of Iowa Academy of Sciences. Des Moines.

Proc. Linn. Soc. Lond.—Proceedings of Linnean Society of London. London.

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Proc. Linn. Soc. N. S. Wales.—Proceedings of Linnean Society of New South Wales. Sydney.

Proc. Liverp. Geol. Soc.—Proceedings of Liverpool Geological Society. Liverpool.

Proc. Lyc. Nat. Hist. N. Y.—Proceedings of Lyceum of Natural History of New York. New York.

Proc. Manchester Soc.—Proceedings of Manchester Field Naturalists' and Archæologists' Society. Manchester.

Proc. Nat. Acad. Sci.—Proceedings of National Academy of Sciences of United States of America. Washington.

Proc. Neb. Acad. Sci.—Proceedings of Nebraska Academy of Sciences. Lincoln.

Proc. N. Eng. Zool. Club.—Proceedings of New England Zoological Club. Cambridge, Mass.

Proc. Nova Scot. Inst.—Proceedings and Transactions of Nova-Scotian Institute of Science. Halifax.

Proc. Philos. Soc. Glasgow.—Proceedings of Philosophical Society of Glasgow. Glasgow.

Proc. Rochester Acad. Sci.—Proceedings of Rochester Academy of Science. Rochester.

Proc. Roy. Dublin Soc.—The Scientific Proceedings of Royal Dublin Society. Dublin.

Proc. Roy. Instn. G. Brit.—Proceedings of Royal Institution of Great Britain. London.

Proc. Roy. Irish Acad.—Proceedings of Royal Irish Academy. Section B: Biological, geological and chemical sciences. Dublin.

Proc. Roy. Phys. Soc. Edinb.—Proceedings of Royal Physical Society of Edinburgh. Edinburgh.

Proc. Roy. Soc. Edinb.—Proceedings of Royal Society of Edinburgh. Edinburgh.

Proc. Roy. Soc. Lond.—Proceedings of Royal Society of London. Series B. London.

Proc. Roy. Soc. Med.—Proceedings of Royal Society of Medicine. London.

Proc. Roy. Soc. Queensland.—Proceedings of Royal Society of Queensland. Brisbane.

Proc. Roy. Soc. Victoria.—Proceedings of Royal Society of Victoria. Melbourne.

Proc. So. Calif. Acad. Sci.—Proceedings of Southern California Academy of Sciences. Los Angeles.

Proc. U. S. Nat. Museum.—Proceedings of United States National Museum. Washington.

Proc. Wash. Acad. Sci.—Proceedings of Washington Academy of Sciences. Washington.

Proc. Wyom. Penn. Geol. Soc.—Proceedings of Wyoming (Penn.) Historical and Geological Society. Wyoming, Penn.

Proc. Yorksh. Geol. Polyt. Soc.—Proceedings of Yorkshire Geological and Polytechnic Society. Halifax, Leeds.

Proc. Zool. Soc. Lond.—Proceedings of scientific meetings of the Zoological Society of London. London.

Prometheus.—Prometheus. Illustrierte Wochenschrift. Berlin.

Pub. Field Columb. Mus. Geol.—See Field Columb. Mus. Geol.

Publ. Ann. Paléont. Paris.—Publications des Annales de Paléontologie. Paris.

Publ. Carnegie Instn. Wash.—Carnegie Institution of Washington publications. Washington.

Quart. Bull. Univ. Oklahoma.—Quarterly Bulletin of University of Oklahoma. Norman.

Quart. Jour. Geol. Soc.—The Quarterly Journal of Geological Society. London.

Quart. Jour. Micr. Sci.—The Quarterly Journal of Microscopical Science. London.

Quart. Jour. Sci. Lit. Art.—Quarterly Journal of Science, Literature and Art. London.

Quart. Rev. Biol.—The Quarterly Review of Biology. Baltimore.

Rad. Jugoslav. Akad.—Rad. Jugoslavenske Akademije Znanosti i Umjetnosti. Zagrab.

Rec. Albany Mus.—Records of the Albany Museum. Grahamstown.

Rec. Austral. Mus.—Records of the Australian Museum. Sydney.

Rec. Geol. Surv. India.—Records of Geological Survey of India. Calcutta.

Rec. Geol. Survey N. S. Wales.—Records of Geological Survey of New South Wales. Sydney.

Rec. Indian Mus.—Records of Indian Museum. A Journal of Indian Zoology. Calcutta.

Records of the Past.—Washington.

Rend. Accad. Sci. Napoli.—Rendiconti delle R. Accademia delle Scienze fisiche e matematiche. Napoli.

Rend. Reale Ist. Lombardo.—Rendiconti del Reale Istituto Lombardo. Milano.

Rep. Amer. Assoc. Geol. Naturalists.—Reports of meetings of Association of American Geologists and Naturalists.

Rep. Amer. Mus. Nat. Hist.—The American Museum of Natural History. Annual reports. New York.

Rep. Brit. Assoc. Adv. Sci.—Report of British Association for the Advancement of Science. London.

Rep. Bur. Ethnol.—Annual report of Bureau of Ethnology. Washington.

Rep. Bur. Mines, Toronto.—Report of Bureau of Mines, Ontario. Toronto.

Rep. Bur. Stat. Geol. Ind.—Report of Bureau of Statistics and Geology. Indianapolis.

Rep. Calif. State Min. Bur.—Report of California State Mining Bureau. Sacramento.

Rep. Carnegie Mus.—Carnegie Museum. Annual report of director. Pittsburgh.

Rep. Colorado Mus. Nat. Hist.—Annual report of Colorado Museum of Natural History. Denver.

Rep. Field Mus. Chicago.—Annual report of director of Field Museum of Natural History. Chicago.

Rep. Fish. Board Scotland.—Annual report of Fishery Board for Scotland. Edinburgh.

Rep. Florida Geol. Surv.—Florida State Geological Survey. Annual reports. Tallahassee.

Rep. Forest, Fish, Game Comm. N. Y.—Annual report of Forest, Fish and Game Commissioner of New York. Albany.

Rep. Geol. Agric. Miss.—Report of Geology and Agriculture of the State of Mississippi. Jackson.

Rep. Geol. Nat. Hist. Surv. Canada.—Annual reports of Geological and Natural History Survey and Museum of Canada. Ottawa.

Rep. Geol. Nat. Hist. Surv. Minn.—The Geological and Natural History Survey of Minnesota. Annual report. Minneapolis.

Rep. Geol. Nat. Hist. Surv. Okla.—Geological and Natural History Survey of Oklahoma. Reports.

Rep. Geol. Surv. Ark.—Annual reports of Geological Survey of Arkansas. Little Rock.

Rep. Geol. Surv. Canada.—Geological Survey of Canada. Annual report of Geological and Natural History Survey and Museum of Canada. Ottawa.

Rep. Geol. Surv. Georgia.—Reports of Geological Survey of Georgia. Atlanta.

Rep. Geol. Surv. Kansas.—The State Geological Survey of Kansas. Reports. Lawrence.

Rep. Geol. Surv. Kentucky.—Reports of Geological Survey of Kentucky. Lexington, Frankfort.

Rep. Geol. Surv. Louisiana.—Report on geology of Louisiana. Baton Rouge.

Rep. Geol. Surv. New Jersey.—Geological Survey of New Jersey. Annual report of the State Geologist. Trenton.

Rep. Geol. Surv. Texas.—Annual report of Geological Survey of Texas. Austin.

Rep. Geol. Surv. Vermont.—Report of State Geologist of Vermont. Burlington.

Rep. Harvard Coll.—Annual report of President of Harvard College. Cambridge.

Rep. Internat. Geogr. Congr.—Report of International Geographical Congress. Places of meetings change. See also Verhandlungen and Comptes-rendus.

Rep. Louisiana Sem.—Annual report of the Board of Supervisors of the Louisiana State Seminary of Learning and Military Academy.

Rep. Mich. Acad. Sci.—Annual Report of Michigan Academy of Science. Lansing.

Rep. N. Y. State Mus.—University of the State of New York. New York State Museum. Annual report of the Regents. Albany.

Rep. N. Y. Zool. Soc.—Annual report of New York Zoological Society. New York.

Rep. Ohio Acad. Sci.—Annual report of Ohio State Academy of Science. Columbus.

Rep. Peabody Mus. Harv.—Annual report of Peabody Museum of Harvard College. Cambridge.

Rep. Prov. Mus. Nat. Hist. Victoria.—Report of Provincial Museum of Natural History, British Columbia. Victoria.

Rep. 2d Norweg. Arct. Exped. Fram.—Report of Second Norwegian Arctic Expedition in the *Fram* 1898–1902. Christiania.

Rep. S. African Assoc. Adv. Sci.—Report of South African Association for Advancement of Science. Place of meetings changes.

Rep. Smithson. Instn.—Annual report of Board of Regents of Smithsonian Institution. Washington.

Rep. State Cab. N. Y.—Annual report of State Cabinet of New York. Albany.

Rep. State Geol. Mich.—Report of State Board of Geological Survey of Michigan. Lansing.

Rep. State Geologist, N. Y.—Report of State Geologist of New York. Albany.

Rep. U. S. Comm. Fish.—United States Commission of Fish and Fisheries. Report of the Commissioner. Washington.

Rep. U. S. Geol. Surv.—Annual report of United States Geological Survey to Secretary of the Interior. Washington.

Rep. U. S. Geol. Surv. Terrs. Hayden.—Annual reports of United States Geological and Geographical Surveys of Territories. F. V. Hayden. Washington.

Rep. U. S. Nat. Mus.—Annual reports of United States National Museum. Washington.

Rep. Yorksh. Philos. Soc.—Annual report of Yorkshire Philosophical Society. York.

Res. Bull. Univ. Okla.—Research Bulletin of State University of Oklahoma. Norman.

Résult. Voy. S. Y. Belg. Zool.—Résultats du Voyage du S. Y. *Belgica.* Zoologie. Antwerp.

Rev. Anthrop.—Revue d'Anthropologie. Paris.

Rev. biolog. Nord France.—Revue biologique du Nord de la France. Lille.

Rev. Mag. Zool.—Revue et Magazine de Zoologie pure et appliquée. Paris.

Rev. crit. Paléozool.—Revue critique de Paléozoologie. Paris.

Rev. gén. Sci. Paris.—Revue générale des Sciences pures et appliquées. Paris.

Rev. Géol. et Sci. conn.—Revue de Géologie et des Sciences connexes. Liége.

Rev. internat. Odont.—Revue internationale d'Odontologie. Paris.

Rev. Mus. La Plata.—Revista del Museo de La Plata. Buenos Aires.

Rev. Quest. sci.—Revue des Questions scientifiques. Publiée par la Société scientifique de Bruxelles. Bruxelles.

Rev. Scient. Paris.—Revue Scientifique. Paris.

Rev. suisse Zool.—Revue suisse de Zoologie. Annales de la Société zoologique suisse et du Musée d'Histoire naturelle, Genève. Genève.

Rev. Zool. Paris.—Revue Zoologique, par la Société Cuvierienne, 1838–1848. Paris.

Rev. Zool. Russe.—Revue Zoologique Russe. (The principal title is in Russian.) Moscou.

Revista Argent. Hist. Nat.—Revista Argentina de Historia Natural. Buenos Aires.

Revista cient. Mexicana.—Revista científica Mexicana. City of Mexico.

Revista Mus. Paulista.—Revista do Musen Paulista. São Paulo.

Riv. ital. Pal.—Rivista italiana di Paleontologia. Parma.

Roy. Irish Acad. Cunningh. Mem.—Royal Irish Academy. Cunningham Memoirs. Dublin.

Samml. Geol. Reichsmus. Leiden.—Sammlungen des geologischen Reichsmuseums in Leiden. Leiden.

Sci. Conspectus.—Science Conspectus. Boston.

Sci. Progress.—Science Progress. A monthly review of current scientific investigations. London.

Sci. Rec.—Science Record. A monthly magazine. Illustrated. Boston.

Sci. Rep. Tohoku Imp. Univ.—The Science reports of Tohoku Imperial University. Sendai, Japan.

Science.—Science: a weekly journal. New York, Lancaster.

Scient. Amer.—Scientific American. New York.

Scient. Amer. Monthly.—Scientific American Monthly. New York.

Scient. Amer. Suppl.—Scientific American. Supplement. New York.

Scient. Memoirs of Huxley.—The Scientific Memoirs of T. H. Huxley, edited by M. Foster and E. R. Lankester. London.

Scient. Monthly.—The Scientific Monthly. Garrison, New York.

Schrift. naturf. Ges. Danzig.—Schriften der naturforschenden Gesellschaft in Danzig. Danzig.

Schrift. phys.-ökonom. Ges. Königsb.—Schriften der physikalisch-ökonomischen Gesellschaft zu Königsberg in Preussen. Königsberg.

Schrift. Ver. Verbr. naturw. Kenntn.—Schriften des Vereins zur Verbreitung naturwissenschaftlicher Kenntnisse. Wien.

Scient. News.—Scientific News. New York.

Scribner's Mag.—Scribner's Magazine. Published monthly with illustrations. New York.

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By Oliver Perry Hay

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—— 1910 E

Kritische Untersuchungen über die paläogenen Rhinocerotiden Europas.

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—— 1911 A

Die Vorfahren der Vögel und ihre Lebensweise.

Verh. zool.-bot. Ges. Wien, LXI, 144-191, 7 text-figs.

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—— 1912 A

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—— 1912 B

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—— 1912 D

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—— 1912 E

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—— 1912 G

Cetaceensstudien. III: Rekonstruktion des Schädels von *Prosqualodon australe* Lyd. aus dem Miozän Patagoniens.

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Die eocänen Sirenen der Mittelmeerregion. Erster Teil: Der Schädel von *Eotherium aegyptiacum*.

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Abel, O.—Continued 1913 C

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—— 1914 A

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8vo., i-vii+1-309 pages, 2 tables, 250 text-figs. Jena, Gustav Fischer.

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—— 1914 B

Die Tiere der Vorwelt.

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Abstract in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 318-319.

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—— 1915 A

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—— 1916 A

Die Dinosaurier und Ornithosaurier Nordamerikas.

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—— 1919 A

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Abel, O.—Continued 1920 B

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—— 1922 A

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—— 1922 B

Desmostylus: ein mariner Multituberculate aus dem Miocän der nordpazifischen Küstenregion.

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—— 1922 C

Lebensbilder aus der Tierwelt der Vorzeit.

8vo., Jena, i-viii+1-643 pages, 505 figs.

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—— 1922 D

Die Schauzenverletzungen der Parasuchier und ihre biologische Bedeutung.

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Ueber wiederholten Wechsel der Körperformen in Laufe der Stammesgeschichte der Teleostomen.

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—— 1923 B

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—— 1924 A

Die neuen Dinosaurierfunde in der Oberkreide Canadas.

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—— 1925 B

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Die Molarisierung der oberen Prämolaren von *Hyracodon nebrascensis* Leidy.

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8vo., Jena, i-x+1-462 pages, 273 figs.

—— 1926 C

Beiträge zu einer Theorie des knöchernen Schädels der Wirbeltiere.

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—— 1926 D

Morphologische Untersuchungen über die Griffelbeine der Pferde.

Anz. Akad. Wiss. Wien., LXIII, 63-64.

Abel, O.—Continued 1926 E

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—— 1902 B

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The bibliography occupies pages 160-165.

Abstracts in Rev. crit. Paléozool., XXV, 6; Geol. Zentralbl., XXVII, 221.

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Adams, Lionel E. 1903 A

A contribution to our knowledge of the mole (*Talpa europæa*).

Mem. Manchester Soc., XLVII, No. 4, 1-39, 28 text-figs.

Adams, Michael F. 1807 A

Some account of a journey to the Frozen Sea, and the discovery of the remains of a mammoth.

Tilloch's Philos. Mag., XXIX, 141-153.

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Addison, William H. F., and J. L. **Appleton**, Jr. 1915 A

The structure and growth of the incisor teeth of the albino rat.

Jour. Morphol., XXVI, 43-96, 29 figs.

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Adelmann, H. B. See **Kingsbury** and **Adelmann**.

Adelung, N. 1901 A

Über den jüngsten Fund einer Mammutleiche in Ostsibirien.

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Adloff, P. 1901 A

Zur Entwickelungsgeschichte des Zahnsystems von *Sus scrofa* domest.

Anat. Anz., XIX, 481-490, 6 text-figs.

—— 1901 B

Ueberzählige Zähne und ihre Bedeutung.

Deutsche Monatsschr. Zahnheilk., XIX, 219-226.

—— 1901 C

Noch Einiges zur Frage nach der Beurtheilung uberzähliger Zähne nebst Bemerkungen über die regressiven Entwickelungsvorgänge im Zahnsystem der Säugethiere.

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—— 1902 A

Zur Kenntniss des Zahnsystems von *Hyrax*.

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—— 1903 A

Zur Frage nach der Entstehung der heutigen Säugethierzahnformen.

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—— 1904 A

Ueber den Zahnwechsel von *Cavia cobaya*.

Anat. Anz., XXV, 141-147, 2 text-figs.

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Über das Gebiss im Lichte der Entwickelungslehre.

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Anat. Anz., XXVI, 333-343.

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Einige Besonderheiten des menschlichen Gebisses und ihre stammesgeschichtliche Bedeutung.

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—— 1908 A

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—— 1909 A

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—— 1909 B

Überreste einer prälaktealen Zahnreihe beim Menschen.

Deutsche Monatsschr. Zahnheilk., XXVII, 828-832.

—— 1910 A

Zur Entwickelungsgeschichte des Nagetiergebisses.

Anat. Anz., XXXVII, 257-271, 76 text-figs.

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Über den gegenwärtigen Stand der vergleichenden Morphologie des Zahnsystems der Säugetiere und des Menschen.

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—— 1911 A

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Zeitschr. Morphol. Anthrop., XIII, 505-532, pls. xvii, xviii, 1 text-fig.

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Adloff, P.—Continued 1912 A

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Zeitschr. Morphol., Anthrop., XV, 381-400, pls. x-xii, 1 text-fig.

—— 1913 A

Zur Frage der prälaktealen Anlagen.

Anat. Anz., XLIII, 236-238.

—— 1913 B

Ueber probleme der Gebissentwicklung.

Anat. Anz. Ergänzungsh., XLIV, 188-195.

—— 1913 C

Zur Entwicklungsgeschichte des menschlichen Zahnsystems nebst Bemerkungen zur Frage der prälaktealen Dentition, der sogenannten Konkreszenztheorie und der Entwicklung des Säugetiergebisses überhaupt.

Arch. mikr. Anat., LXXXII, 1-38, pls. i, ii, 5 text-figs.

—— 1913 D

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Naturwiss. Berlin, I, 869-870.

—— 1914 A

Zur Entwickelungsgeschichte des Cervidengebisses, ein Beitrag zur Frage der prälaktealen Dentition.

Anat. Anz., XLVI, 359-366, 15 text-figs.

—— 1915 A

Probleme der Gebissentwickelung.

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—— 1916 A

Entwickelungsgeschichte des Zahnsystems von *Centetes ecaudatus*, nebst Bemerkungen zur Frage der Existenz einer präpermanenten Dentition.

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The bibliography contains 7 titles.

—— 1917 A

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—— 1917 B

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—— 1918 A

Die Beziehungen zwischen Reptilien, Beutler- und Plazentaliergebiss.

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Adloff, P.—Continued 1920 A

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—— 1899 A

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—— 1922 A

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Aeby, Chr. 1873 A

Ueber das Kiefergerüst der Vögel.

Arch. Anat. Physiol. Med., 1873, 699-705, pl. xii.

Ärnbäck-Christie-Linde, A. 1907 A

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—— 1909 A

On intermediate forms among Chiroptera.

Zool. Anz., XXXIV, 572-582, 4 text-figs.

—— 1912 A

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—— 1912 B

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Agar, W. E. 1906 A

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—— 1907 A

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Agassiz, Alexander 1877 A

On the young stages of some osseous fishes. I: Development of the tail.

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—— 1833 A

Synoptische Übersicht der fossilen Ganoiden.

Neues Jahrb. Min. Geol. Pal., 1833, 470-481.

From his Recherches sur les Poissons fossiles, 1833, II, 1-18.

—— 1834 A

Abgerissene Bemerkungen über fossile Fische.

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—— 1835 B

Work of Agassiz on fossil fishes.

Edinb. New Philos. Jour., XIX, 331-346.

This is an anonymous review of Agassiz's work, with extensive quotations.

—— 1835 C

Sur un nouveau poisson fossile de Burdiehouse.

L'Institut, III, 58.

An abstract of an address on *Megalichthys hibberti*, but without technical description.

—— 1835 D

Sur les poissons fossiles du calcaire de Burdiehouse.

L'Institut, II, 189-190.

Abstract of a communication from Agassiz regarding fossil fishes. Presented by Mr. S. Hibbert.

Agassiz, L.—Continued 1835 E
[Remarks on *Lepisosteus*.]
L'Institut, III, 199.

—— 1835 F
Remarks on fossil fishes.
L'Institut, III, 253-254.
Quotation from L. Agassiz in a communication made by Professor Jameson.

—— 1835 G
Remarques détachées sur des poissons fossiles.
Bull. Soc. Natural. Moscou, VIII, 181-201.
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—— 1835 H
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—— 1835 I
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—— 1835 J
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—— 1836 A
Views of the affinities and distribution of the fishes of the family Cyprinidæ.
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—— 1836 B
Sur les principes d'une classification du règne animal en général et des mammifères en particulier.
L'Institut, Paris, IV, 24.

—— 1838 A
Über die Familie der Karpfen.
Arch. Naturges., IV, I, 73-82.

—— 1839 A
Fishes of the Old Red Sandstone.
Murchison's Silurian System, 589-606, pls. i, ii.
Quotations of remarks made by Agassiz.

—— 1839 B
Ichthyodorulites of the Upper Ludlow rock.
Murchison's Silurian System, 607-608.
Quotations of remarks made by Agassiz.

Agassiz, L.—Continued 1840 A
Remarques sur la structure des écailles des poissons.
Ann. Sci. Nat. (2), XIII, 58-61.

—— 1840 B
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Ann. Sci. Nat. (2), XIII, 62-63.

—— 1840 C
Observations sur la structure et le mode d'accroissement des écailles des poissons, et réfutation des objections de M. Mandl.
Ann. Sci. Nat. (2), XIV, 97-110, pls. iv, v ("iii, iv a").
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—— 1843 A
Report on the fossil fishes of the Devonian system, or Old Red Sandstone.
Rep. Brit. Assoc. Adv. Sci., 12th Meet., Manchester, 1842, 80-88.
See also L'Institut, XI, 1843, 14-16; Neues Jahrb. Min. Geol. Pal. 1843, 750-751; Biblioth. Univ. Geneve, XLIII, 1843, 353-369.

—— 1844 C
Notice sur la succession des poissons fossiles dans la série des formations géologiques.
Ann. Sci. Nat. (3), II, 251-271.

—— 1844 D
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Edinb. New Philos. Jour., XXXVII, 132-143.

—— 1844 E
On fossil fishes. 1: Classification. 2: Illustrated by comparative anatomy. 3: Importance in geology.
Edinb. New Philos. Jour., XXXVII, 331-347.
This review, written probably by the editor, Robert Jameson, is a brief résumé of Agassiz' "Recherches sur les Poissons Fossiles."

—— 1845 B
Remarks on Professor Pictet's "Treatise on Palaeontology."
Edinb. New Philos. Jour., XXXIX, 295-302.

—— 1845 C
On fossil fishes, particularly those of the London clay.
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—— 1848 B
Remarks on the petrifaction of *Mallotus villosus* in Iceland.
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Extraordinary fishes from California, constituting a new family.
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—— 1854 A
The fossil sharks of the Tertiary of South Carolina.
Proc. Elliott Soc. Nat. Hist., I, 4.
A brief note only.

—— 1856 B
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Proc. Bost. Soc. Nat. Hist., VI, 37-38.

—— 1856 C
Development of scales in garpike and sturgeon.
Proc. Bost. Soc. Nat. Hist., VI, 63.

—— 1858 A
Various existing systems of classification of fishes.
Proc. Amer. Acad. Arts, Sci., IV, 8-9.

—— 1859 A
The classification of fishes.
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—— 1859 B
[Letter written to F. S. Holmes on vertebrate remains found near Charleston, S. C.]
Proc. Acad. Nat. Sci. Phila., XI, 1859, 185-186.

—— 1868 A
Remarks on the classification of siluroids.
Proc. Bost. Soc. Nat. Hist., XI, 354.

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Three different modes of teething among selachians.
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——, and C. **Vogt** 1845 A
Anatomie des salmones.
Mem. III, Neuchâtel, 1845, 1-196 pages, pls. A-O.

Ahlborn, F. 1896 B
Über die Bedeutung der Heterocerkie und ähnlicher unsymmetrischer Schwanzformen schwimmender Wirbelthiere für die Ortsbewegung.
Zeitschr. wiss. Zool., LXI, 1-15, pl. i.
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Zur Frage der prälaktischen Zahnanlage.
Anat. Anz., XLII, 506-514.

Ahrens, Hans—Continued 1912 B
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—— 1913 A
Entgegnung an Adloff.
Anat. Anz., XLIII, 524-527.

—— 1913 B
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Aichel, Otto 1917 A
Ist Konkreszenz als Factor bei der phylogenetischen Umwandlung der Zahnform sichergestellt?
Anat. Anz., L, 97-110, 7 figs.

—— 1917 B
Zur Frage der Konkreszenzhypothese.
Anat. Anz., L, 400-406.

—— 1918 A
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Anat. Anz., LI, 502-510, 3 figs.

—— 1918 B
Kausale Studie zum ontogenetischen und phylogenetischen Geschehen am Kiefer unter besonderer Berücksichtigung von *Elephas* und *Manatus*.
Abh. Akad. Wiss. Berlin, 1918, No. 3, 1-109, pls. i-v, 21 text-figs.

—— 1919 A
Zur Discussion über das Problem der Entstehung der Zahnform.
Anat. Anz., LII, 81-90, 145-152, 193-206, 241-260, 417-439.
Pages 417-439 were published in 1920.

—— 1926 A
Über Zahndurchbruch und Kieferresorption, sowie über das Os sacculi (Aichel).
Anat. Anz., LXI, 42-43.

Airaghi, Carlo 1917 A
Sui molari d'elefante delle alluvioni Lombarde con osservazioni sulla filogenia e scomparsa di alcuni proboscidati.
Mem. Soc. ital. Sci. Nat., VIII, 197-242, pls. xiii-xv.
In the bibliography are listed 46 titles.

Airey, Leslie B. 1919 A
On the presence of haversian systems in membrane bone.
Anat. Rec., XVII, 59-61, 2 figs.

Aladyna, M. 1910 A
Sur le tissu du squelette des téléostéens.
Biol. Zeitschr. Moscou, I, 239-240.

Albrecht, P. 1883 A
Das Os intermedium tarsi der Säugethiere.
Zool. Anz., VI, 419-420, 2 text-figs.

—— 1883 B
Note sur la présence d'épiphyses terminales sur le corps des vertèbres d'un exemplaire de *Manatus americanus.*
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Note sur le basioccipital des batraciens anoures.
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Alden, Wm. C. 1924 A
The physical features of central Massachusetts.
Bull. U. S. Geol. Surv. 760 B., i-v+1-165 pages, pls. vi-xxii, 11 text-figs.

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The Iowan drift, a review of the evidences of the Iowan stage of glaciation.
Iowa Geol. Surv. XXVI, 49-212, pls. i-xiii, 15 text-figs.

Alessandrini, Antonio 1849 A
De intima squamarum textura piscium, deque scutulis super corio scatentibus crocodili, atque armadili.
Novi Comm. Acad. Sci. Inst. Bonon., IX, 371-392, pls. xxiii-xxvii.

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Structura integumentorum armadili, *Dasypus novemcinctus* Linn.
Novi Comm. Acad. Sci. Inst. Bonon., IX, 393-410, pls. xxviii, xxix.

Alexander, G. 1904 A
Entwicklung und Bau des inneren Gehörorganes von *Echidna aculeata.*
Semons Zool. Forschungsr., III, 3-118, pls. i-xxiii, 24 text-figs.
The bibliography presents 36 titles.

Alezais, H. 1901 A
Étude anatomique du cobaye (*Cavia cobaye*).
Jour. Anat. Physiol. Paris, XXXVII, 102-126, 270-290, figs. 23-42.
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—— 1902 A
Quelques adaptations fonctionnelles du rhachis cervical chez les mammifères.
C. R. Assoc. franc. Avanc. Sci., 1901, 30me sess. Ajaccio, sec. partie, 582-588.

Alezais, H.—Continued 1902 B
Le membre pelvien du Kangourou.
C. R. Assoc. Anatomistes, IV, Montpelier, 87-89.

Alix, Edmond 1874 A
Sur la signification des os du bassin des crocodiles.
Jour. Zool. Paris, III, 17-20.

—— 1874 B
Sur l'absence de véritables apophyses articulaires aux vertèbres des poissons osseux.
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Allen, Glover M. 1901 E
The Louisiana deer.
Amer. Naturalist, XXXV, 449-454.

—— 1906 A
Sowerby's whale on the American coast.
Amer. Naturalist, XL, 357-370, 4 text-figs.
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Mem. Mus. Comp. Zool., XL, 319-346, pls. i-iv.
Abstract in Geol. Centralbl., XX, 313-314.

—— 1914 A
The barren-ground caribou.
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—— 1916 A
The whalebone whales of New England.
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A bibliography occupies pages 317-322.
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—— 1919 A
The American collared lemmings (*Dicrostonyx*).
Bull. Mus. Comp. Zool., LXII, 509-540, pl. i, 1 text-fig.
There is a bibliography of 24 titles.

—— 1920 A
Dogs of the American aborigines.
Bull. Mus. Comp. Zool., LXIII, 431-517, pls. i-xii.
The bibliography occupies pages 504-517.

—— 1920 B
Bison remains from New England.
Jour. Mamm., I, 161-164, 3 figs.

—— 1921 A
Fossil cetaceans from the Florida phosphate beds.
Jour. Mamm., II, 144-159, pls. ix-xii.
The bibliography presents titles of 15 papers.

Allen, Glover M.—Continued 1921 B

A review of Winge and Miller on Cetacea.

Jour. Mamm., II, 240-241.

—— 1921 C

A new fossil cetacean.

Bull. Mus. Comp. Zool., LXV, art. 1, 4-14, 1 pl.

Describes *Archæodelphis patrius* Allen.

—— 1923 A

Additional remains of the fossil dugong of Florida.

Jour. Mamm., IV, 231-239, pl. xxvi, 1 text-fig.

—— 1924 A

The type-specimen of *Saurocetus gibbesii* Agassiz.

Jour. Mamm., V, 120-121, 2 figs.

—— 1924 B

The *Delphinus occiduus* of Leidy.

Jour. Mamm., V, 194-195.

—— 1926 A

Fossil animals from South Carolina.

Bull. Mus. Comp. Zool., LXVII, 447-467, pls. i-v.

Allen, Harrison 1864 A

Monograph of the bats of North America.

Smithson. Misc. Coll., VII, art. I, i-xxii+ 1-85 pages, 68 text-figs.

Allen, Henry T. 1887 A

Report of an expedition to the Copper, Tanana, and Koyukuk Rivers in the Territory of Alaska, in the year 1885. 1-172, with plates and maps.

Government Printing Office, Washington, 1887.

Allen, J. A. 1870 A

On the eared seals (Otariadæ), with detailed description of the North Pacific species. Together with an account of the habits of the northern fur seal (*Callorhynchus ursinus*), by Charles Bryant.

Bull. Mus. Comp. Zool., II, 1-108, pls. i-iii.

For review see Gill, T., 1871 C.

—— 1871 A

On the geographical distribution of the birds of eastern North America, with special reference to the number and circumscription of the ornithological faunæ.

Bull. Mus. Comp. Zool., II, 375-450.

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Allen, J. A.—Continued 1882 A

Preliminary list of works and papers relating to the mammalian orders Cete and Sirenia.

Bull. U. S. Geol. Geogr. Surv. Terrs., VI, No. 3, 399-562.

—— 1892 A

The geographical distribution of North American mammals.

Bull. Amer. Mus. Nat. Hist., IV, 199-243, pls. v-viii.

—— 1893 B

The geographical origin and distribution of North American birds, considered in relation to faunal areas of North America.

Auk (n.s.), X, 97-150.

—— 1894 A

Cranial variations in *Neotoma micropus* due to growth and individual differentiation.

Bull. Amer. Mus. Nat. Hist., VI, 233-246, pl. iv.

—— 1897 A

The proper generic name of the loons.

Auk, XIV, 312.

—— 1898 A

Revision of the chickarees, or North American red squirrels (subgenus *Tamiasciurus*).

Bull. Amer. Mus. Nat. Hist., X, 249-298.

Presents numerous cranial measurements.

—— 1900 B

The mountain caribou of northern British Columbia.

Bull. Amer. Mus. Nat. Hist., XIII, 1-18, 18 text-figs.

—— 1900 C

Note on the wood bison.

Bull. Amer. Mus. Nat. Hist., XIII, 63-68.

—— 1901 A

The musk-oxen of arctic America and Greenland.

Bull. Amer. Mus. Nat. Hist., XIV, 69-86, pls. xii-xvii, 7 text-figs.

—— 1901 B

A preliminary study of the North American opossums of the genus *Didelphis*.

Bull. Amer. Mus. Nat. Hist., XIV, 149-188, pls. xxii-xxv.

—— 1901 C

The generic names of the Mephitinæ.

Bull. Amer. Mus. Nat. Hist., XIV, 325-334.

Allen, J. A.—Continued 1901 D
Note on the generic names *Didelphis* and *Philander*.
Bull. Amer. Mus. Nat. Hist., XIII, 185-190.

—— 1902 A
Nomenclatorial notes on American mammals.
Bull. Amer. Mus. Nat. Hist., XVI, 159-168.

—— 1902 B
A preliminary study of the South American opossums of the genus *Didelphis*.
Bull. Amer. Mus. Nat. Hist., XVI, 249-279.

—— 1902 C
The hair seals (family Phocidæ) of the North Pacific Ocean and Bering Sea.
Bull. Amer. Mus. Nat. Hist., XVI, 459-499, 10 figures.
This paper presents numerous measurements of skulls of species of *Phoca*.

—— 1902 D
A further note on the generic names of the Mephitinæ.
Proc. Biol. Soc. Wash., XV, 59-66.

—— 1902 E
Mammal names proposed by Oken in his "Lehrbuch der Zoologie."
Bull. Amer. Mus. Nat. Hist., XVI, 373-379.

—— 1903 A
Report on the mammals collected in northeastern Siberia by the Jesup North Pacific expedition, with itinerary and field notes, by N. G. Buxton.
Bull. Amer. Mus. Nat. Hist., XIX, 101-184.

—— 1904 A
A fossil porcupine from Arizona.
Bull. Amer. Mus. Nat. Hist., XX, 383-384.
Abstracts in Geol. Centralbl., VII, 426; Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 305.

—— 1904 B
The external ear-bone in rodents.
Bull. Amer. Mus. Nat. Hist., XX, 135-138, 2 figs.

—— 1905 A
The evolution of species through climatic conditions.
Science (n.s.), XXII, 661-668.

—— 1906 A
The "elimination" and "first species" methods of fixing the types of genera.
Science (n.s.), XXIV, 773-779, 858.

Allen, J. A.—Continued 1908 A
The generic names *Mycteria* and *Tantalus* of Linnæus, 1758.
Auk, XXV, 37-38.

—— 1908 B
Notes on *Solenodon paradoxus* Brandt.
Bull. Amer. Mus. Nat. Hist., XXIV, 505-517, pls. XXVIII-XXXIII, 9 text-figs.

—— 1912 A
The probable recent extinction of the musk-ox in Alaska.
Science (n.s.), XXXVI, 720-722.

—— 1912 B
Historical and nomenclatorial notes on North American sheep.
Bull. Amer. Mus. Nat. Hist., XXXI, 1-29.

—— 1913 A
Ontogenetic and other variations in musk-oxen, with a systematic review of the musk-ox group, recent and extinct.
Mem. Amer. Mus. Nat. Hist. (n.s.), I, pt. IV, 101-226, pls. XI-XVIII, 46 text-figs.

—— 1913 B
Review of Gerrit S. Miller: List of North American land mammals in the United States National Museum in 1911.
Science (n.s.), XVIII, 453-454.

—— 1914 A
Individual variation in musk-oxen.
C. R. Congr. internat. Zool., 1913, Monaco, 210-215.

—— 1920 A
Note on Gueldenstaedt's names of certain species of Felidæ.
Jour. Mamm., I, 90-91.

Allis, Edward Phelps 1897 A
The morphology of the petrosal bone and of the sphenoidal region of the skull of *Amia calva*.
Zool. Bull., II, 1-26.

—— 1898 A
On the morphology of certain of the bones of the cheek and snout of *Amia calva*.
Jour. Morphol., XIV, 425-466, pl. XXXIII.
There is appended a bibliography of 48 titles.

—— 1898 B
The homologies of the occipital and first spinal nerves of *Amia* and teleosts.
Zool. Bull., II, 83-97.

Allis, Edward Phelps—Cont'd. 1903 A

On certain features of the lateral canals and cranial bones of *Polyodon folium*.

Zool. Jahrb., Anat., XVII, 659-678, pl. xxviii, 2 text-figs.

—— 1903 B

The skull and the cranial and first spinal muscles and nerves in *Scomber scomber*.

Jour. Morphol., XVIII, 45-308, pls. iii-xii.

There is a bibliography of 80 titles. Review in Anat. Anz., XXIV, 408-410.

—— 1905 A

The latero-sensory canals and related bones in fishes.

Internat. Monatsschr. Anat. Physiol., XXI, 401-504, pls. viii-xx, 1 text-fig.

—— 1907 A

The cranial anatomy of the mail-cheeked fishes.

Anat. Anz., XXX, 568-573.

—— 1909 A

The cranial anatomy of the mail-cheeked fishes.

Zoologica, Stuttgart, XXII, Heft. 57, i-iii+ 1-219 pages, pls. i-viii.

In the bibliography, pages 209-212, there are cited 107 works on the subject.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 22.

—— 1913 A

The homologies of the ethmoidal region of the selachian skull.

Anat. Anz., XLIV, 322-328.

There is a bibliography of 15 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 39-41.

—— 1914 A

Certain homologies of the palato-quadrate of selachians.

Anat. Anz., XLV, 353-373.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 41.

—— 1915 A

The homologies of the hyomandibula of the gnathostome fishes.

Jour. Morphol., XXVI, 563-624, 1 fig.

There is a bibliography of 56 titles.

—— 1917 A

The prechordal portion of the chondrocranium of *Chimæra colliei*.

Proc. Zool. Soc. Lond., 1917, 105-143, pls. i-iii.

The bibliography records 30 titles.

Allis, Edward Phelps—Cont'd. 1918 A

The myodome and trigemino-facialis chamber of fishes, and the corresponding cavities in higher vertebrates.

Proc. Nat. Acad. Sci., IV, 241-246.

—— 1918 B

On the origin of the hyomandibula of the Teleostomi.

Anat. Record, XV, 257-265, 1 fig.

—— 1919 A

The homologies of the maxillary and vomer bones of *Polypterus*.

Amer. Jour. Anat., XXV, 349-389, pls. i-iii.

There is a bibliography of 34 titles.

—— 1919 B

On the homologies of the squamosal bone of fishes.

Anat. Record, XVII, 72-87.

The bibliography includes 24 titles.

—— 1919 C

On certain features of the otic region of the chondrocranium of *Lepidosteus* and comparison with other fishes and higher vertebrates.

Proc. Zool. Soc. Lond., 1919, 245-266.

The bibliography presents 34 titles.

—— 1919 D

The homologies of the alisphenoids of the Sauropsida.

Jour. Anat. Lond., LIII, 209-222.

The bibliography presents 30 titles.

—— 1919 E

On the homologies of the auditory ossicles and the chorda tympani.

Jour. Anat. Lond., LIII, 362-369.

—— 1920 A

The constrictor muscles of the branchial arches in *Acanthias blainvillii*.

Jour. Anat. Lond., LIV, 222-231, pls. xxiii-xxv.

Six titles are in the bibliography.

—— 1922 A

The myodome and the trigemino-facialis chamber in the Cœlacanthidæ, Rhizodontidæ, and Palæoniscidæ.

Jour. Anat. Lond., LVI, 149-154.

The bibliography cites 15 papers.

—— 1922 B

The cranial anatomy of *Polypterus*, with special reference to *Polypterus bichir*.

Jour. Anat. Lond., LVI, 189-294, pls. iii-xxiv.

In the bibliography are recorded 36 titles.

Allis, Edward Phelps—Cont'd. 1922 C
On certain features of the latero-sensory canals of the Plagiostomi.
Jour. Comp. Neur., xxxv, 1-14.
The literature cited includes 13 titles.

—— 1923 A
The postorbital articulation of the palatoquadrate with the neurocranium in the cœlacanthid fishes.
Proc. Zool. Soc. Lond., 1923, 41-58.
The bibliography presents titles of 33 papers.

—— 1923 B
The cranial anatomy of *Chlamydoselachus anguineus*.
Acta Zool., iv, 123-221, pls. i-xxiii.
In this bibliography are 72 titles.

—— 1925 A
On the origin of the V-shaped branchial arch in the Teleostomi.
Proc. Zool. Soc. Lond., 1925, pt. 1, 75-77.
8 titles are found in the bibliography.

—— 1926 A
On certain features of the orbito-ethmoidal region in the Cyclostomata, Plagiostomi and Teleostomi.
Jour. Anat. Lond., lx, 164-172.
The bibliography includes 24 titles.

—— 1926 B
On the homologies of the prechordal portion of the skull of the Holocephala.
Jour. Anat. Lond., lx, 325-340.
In the bibliography are 11 titles.

Allis, T. H. 1835 A
On the mode of attachment of the os furcatum to the sternum in various grallatorial and natatorial birds.
Proc. Zool. Soc. Lond., 1835, 155.

Alth, A. 1884 A
On the shield in fish of the genera *Pteraspis* and *Scaphaspis* from the palæozoic strata of Galician Podolia.
Kraków Akad. (mat-przyrod.) Rospr. i Spraw., xi, 160-187+lxiii-lxvi, pl. vi.
This paper, probably issued as a separate in 1833, is printed in Polish.
Dean, B, 1917 A, p. 24, has quoted it from the memoirs (Pamietnik) of the Academy of Krakow, 1886.
Abstract in Archives slaves de Biologie, i, 1886, Analyses et C. R.

Altmann, Franz 1925 A
Untersuchungen über die Torsio femoris und damit im Zusammenhang stehende Fragen.
Zeitschr. Anat. Entwicklungsges., Abt. I, lxxv, 82-126, 27 figs.
The bibliography occupies pages 124-126.

Amalitsky, V. P. 1921 A
Dvinosauridæ.
North Dvina Excavations of Prof. V. P. Amalitsky, i, 1-16, pls. i-iv.

—— 1921 B
Seymouridæ.
North Dvina Excavations of Prof. V. P. Amalitsky, ii, 1-14, pls. i, ii. Petrograd Akad. Nauk.

—— 1922 A
Diagnoses of the new forms of vertebrates and plants from the Upper Permian on North Dvina.
Bull. Acad. Sci. Russie, 1922, 329-340, 14 figs. Preface by A. Karpinsky. Reprint, pages 1-12.

—— 1924 A
On the Dvinosauridæ, a family of labyrinthodonts from the Permian of Russia.
Ann. Mag. Nat. Hist. (9), xiii, 50-64, pl. i.
The bibliography presents 17 titles.

—— 1924 B
On new *Cotylosauria* of the family Seymouridæ from the Permian of North Russia.
Ann. Mag. Nat. Hist. (9), xiii, 64-77.
The bibliography presents 8 titles. The paper is translated from the Russian. 4to., Petrograd, 1921, 1-14, 3 pls.
Abstract in Neues Jahrb. Min. Geol. Pal., 1924, i, 397-399.

Ameghino, Carlos 1916 A
La formula dentaria del genero *Arctotherium*.
Physis. ii, 285-286.

——, and L **Kraglievich** 1921 A
Descripción del *Megatherium gallardoi* C. Ameg.
An. Mus. Nac. Buenos Aires, xxxi, 135-156, 5 pls.
Reprints with pagination 1-24.

Ameghino, F. 1883 B
Sobre una nueva coleccion mamiferos fósiles recogidos por el profesor Scalabrini en las barrancas del Parana.
Bol. Acad. Cien. Cordóba, v, 55-104.

—— 1885 A
Nuevos restos de mamíferos fósiles oligocenos recogidos por el profesor Pedro Scalabrini y pertenecientes al Museo Provincial de la Cuidad del Parana.
Bol. Acad. Cien. Cordóba, viii, 5-205.

Ameghino, F.—Continued 1886 B

Oracanthus und Cœlodon, verschiedene Gattungen einer und derselben Familie.

Sitz-Ber. Akad. Wiss. Berlin, 1886, I, 463-466.

—— 1889 A

Contribucion al conocimiento de los mamíferos fósiles, etc.

Act. Acad. Cien. Cordóba, VI, i-xxxiii+ 1-1027 pages, atlas of pls. i-xcviii.

—— 1889 B

Sur les mammifères fossiles de la République Argentine.

C. R. Congr. internat. Zool. Paris, 1889, 280.

—— 1891 E

Mamíferos y aves fósiles argentinas. Especies nuevas, adiciones y correcciones.

Revista Argent. Hist. Nat., I, 240-259, 1 figure.

—— 1893 A

Enumération synoptique des espèces de mammifères fossiles des formations éocènes.

Bol. Acad. Cien. Cordóba, XIII, 259-452, 66 figs.

There is appended an extensive bibliography.

—— 1893 B

New discoveries of fossil Mammalia of southern Patagonia.

Amer. Naturalist, XXVII, 439-449.

Translated from Rev. Scient. Paris, LI, 13-17.

—— 1893 C

Les premiers mammifères. Rélations entre les mammifères diprotodontes éocènes de l'Amerique du Nord et ceux de la République Argentine.

Rev. gen. Sci. Paris, IV, 77-81, 5 figs.

—— 1893 D

Les mammifères fossiles de la Patagonie australe.

Rev. Scient. Paris, LI, 13-17.

—— 1893 E

Nouvelles découvertes paléontologiques dans la Patagonie australe.

Rev. Scient. Paris, LI, 731.

—— 1897 B

South America as the source of the Tertiary Mammalia.

Nat. Sci., XI, Oct., 256-264.

Ameghino, F.—Continued 1898 C

L'âge des couches fossilifères de Patagonie; nouvelles découvertes de mammifères fossiles.

Rev. Scient. Paris (4), X, 72-74.

—— 1900 A

Mamíferos del cretáceo inferior de Patagonia (Formación de las areniscas abigarradas).

Commun. Mus. Nac. Buenos Aires, I, 197-206, 5 text-figs.

Abstract in Geol. Centralbl., I, 122.

—— 1900 B

Grypotherium, nom de genre à effacer.

Commun. Mus. Nac. Buenos Aires, I, 257-260.

Abstract in Geol. Centralbl., II, 187.

—— 1901 A

Notices préliminaires sur des ongulés nouveaux des terrains crétacés de Patagonie.

Bol. Acad. Cien. Córdoba, XVI, 349-426.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, I, Ref., 167-172; Rev. crit. Paléozool., VI, 53-59.

—— 1902 A

Linea filogenética de los proboscideos.

An. Mus. Nac. Buenos Aires (3), I, 19-42, with a phylogenetic table and 38 text-figs.

Abstract in Rev. crit. Paléozool., 1-4; Jabresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 117-118.

—— 1902 B

Cuadro sinóptico de las formaciones sedimentarias, terciarias y cretáceas de la Argentina en relación con el desarrollo y descendencia de los mamíferos.

An. Mus. Nac. Buenos Aires (3), I, 1-12.

Abstract in Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 110-113.

—— 1902 C

Notas sobre algunos mamíferos fósiles nuevos ó poco conocidos del valle de Tarija.

An. Mus. Nac. Buenos Aires (3), I, 225-261, pls. i-vii, 1 text-fig.

For abstract see Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 289-290.

Abstract in Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 110-113.

Ameghino, F.—Continued 1902 D

Sur le type primitif des molaires plexodontes des mammifères.

An. Mus. Nac. Buenos Aires (3), I, 419-439, pls. i-viii, 16 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 110-113.

—— 1903 A

Los diprotodontes del orden de los plagiaulacoideos y el origen de los roedores y de los polimastodontes.

An. Mus. Nac. Buenos Aires (3), II, 81-192, 121 text-figs.

The paper concludes with a bibliography of 55 titles.

Reviews in Neues Jahrb. Min. Geol. Pal., 1905, I, Ref., 157-166; Rev. crit. Paléozool., VII, 184-187.

Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 182-183.

—— 1904 A

Recherches de morphologie phylogénétique sur les molaires supérieures des ongulés.

An. Mus. Nac. Buenos Aires (3), III, 1-541, 631 text-figs.

Abstracts in Rev. crit. Paléozool., VIII, 199-206; Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 454-468.

—— 1904 B

Paleontología Argentina.

Pubs. Univ. de La Plata (Repúblic Argentina) No. 2, 1-79, 72 text-figs.

For an extensive notice of this paper by M. Schlosser see Neues Jahrb. Min. Geol. Pal., 1906, II, Ref., 124-131.

—— 1904 C

Nuevas especies de mamíferos, cretáceous, y tercíarios de la Republica Argentina.

An. Soc. Cien. Argent., VI-VIII, 1-142.

—— 1905 A

La faceta articular inferior unica del astragalo de algunos mamíferos, no es un carácter primitivo.

An. Mus. Nac. Buenos Aires (3), V, 1-64, 69 text-figs.

For abstracts see Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 475-477; Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 168-169.

—— 1905 B

Presencia de la perforación astragaliana en el tejón (*Meles taxus* Bodd.).

An. Mus. Nac. Buenos Aires (3), V, 193-201, 3 text-figs.

Ameghino, F.—Continued 1905 C

La perforación astragaliana en los mamíferos no es un carácter originariamente primitivo.

An. Mus. Nac. Buenos Aires (3), IV, 349-460, 98 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 169.

—— 1906 A

Les formatíons sedimentaires du crétacé supérieur et du tertiaire de Patagonie.

An. Mus. Nac. Buenos Aires (3), VIII, 1-568, pls. i-iii, 358 text-figs.

Pages 3-18 are an extensive bibliography.

Abstract in Rev. crit. Paléozool., XI, 65-71.

Reviewed in Nature, LXXVII, 68.

—— 1906 B

La perforación astragaliana en Priodontes *Canis* (*Chrysocyon*) y *Typotherium*.

An. Mus. Nac. Buenos Aires (3), VI, 1-19, 15 text-figs.

Abstracts in Rev. crit. Paléozool., X, 16.

—— 1906 C

La perforación astragalienne sur quelques mammifères du miocène moyen de France.

An. Mus. Nac. Buenos Aires (3), VI, 41-58, 12 text-figs.

Abstract in Rev. crit. Paléozool., X, 16.

—— 1906 D

La perforación astragaliana en el *Orycteropus* y el origen de los Orycteropidæ.

An. Mus. Nac. Buenos Aires (3), VI, 59-95, 32 text-figs.

Abstract in Rev. crit. Paléozool., X, 16.

—— 1906 E

Les édentés fossiles de France et d'Allemagne.

An. Mus. Nac. Buenos Aires (3), VI, 175-250, 61 text-figs.

Abstract in Rev. crit. Paléozool., X, 83-86.

—— 1907 A

Notas sobre una pequeña coleccion de huesos de mamiferos procedentes de las grutas calcáreas de Iporanga en el Estado de São Paulo, Brazil.

Revista Mus. Paulista, VII, 59-124, 22 text-figs.

—— 1908 A

Sobre dos esqueletos de mamíferos fósiles armados recientemente en el Museo Nacional.

An. Mus. Nac. Buenos Aires (3), IX, 35-43, 4 text-figs.

Ameghino, F.—Continued 1908 B

Notes sur les poissons du Patagonien.

An. Mus. Nac. Buenos Aires (3), IX, 477-497, 3 text-figs.

—— 1909 A

El arco escapular de los edentados y monotremos y el origen reptiloide de estos dos grupos de mamíferos.

An. Mus. Nac. Buenos Aires (3), X, 1-91, 60 text-figs.

Note on by Lydekker, Nature, LXXVIII, 348.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 159.

—— 1909 B

Encore quelques mots sur les tatous fossiles de France et d'Allemagne.

An. Mus. Nac. Buenos Aires (3), X (XVII), 93-110, 12 figs.

—— 1911 A

L'avant-première dentition dans le tapir.

An. Mus. Nac. Buenos Aires (3), XIII, 1-30, pls. i-iv.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 351-352; Rev. crit. Paléozool., XIV, 173.

—— 1912 A

L'âge des formations sédimentaires tertiaires de l'Argentine en relation avec l'antiquité de l'homme.

An. Mus. Nac. Buenos Aires (3), XV, 45-75.

—— 1912 B

L'âge des formations sédimentaires tertiaires de l'Argentine en relation avec l'antiquité de l'homme. Note supplémentaire.

An. Mus. Nac. Buenos Aires (3), XV, 169-179.

Ami, H. M. 1897 A

Contribution to the palæontology of the Post-pliocene deposits of the Ottawa Valley.

Ottawa Naturalist, XI, 20-26.

—— 1898 A

The mastodon in western Ontario.

Science (n.s.), VII, 80.

Title wrongly quoted in Hay, O. P., 1902 A, page 19.

Abstract in Ottawa Naturalist, XI, 223.

—— 1899 A

[On certain fossils.]

Summ. Rep. Geol. Surv. Canada, 1898 (1899), 174-182.

Ami, H. M.—Continued 1901 A

On a new ostracoderm (*Euphanerops longævus*) from the Upper Devonian of Scaumenac Bay, Province of Quebec, Canada.

Ottawa Naturalist, XV, 174.

An abstract of Woodward, A. S., 1900 B.

—— 1901 B

Knoydart formation of Nova Scotia.

Bull. Geol. Soc. Amer., XII, 301-312, 1 text-fig.

—— 1901 C

List of fossils to accompany report by Dr. R. W. Ells on the city of Ottawa map.

Rep. Geol. Surv. Canada for 1899, XII, G, 51-77.

The vertebrate fossils belong to the Pleistocene and are recorded on pages 53 and 54.

—— 1901 D

Palæontological note.

Canad. Rec. Sci., VIII, 331-332.

A review of Cope, E. D., 1894 G, on *Cyphornis*.

—— 1902 A

Description of tracks from the fine-grained siliceous mudstones of the Knoydart formation (Eo-Devonian) of Antigonish County, Nova Scotia.

Trans. Nova Scot. Inst. Sci., X, 330-332, pl. ii. Abstract in Rev. crit. Paléozool., VIII, 24.

Ammon, Ludwig von 1911 A

Schildkröten aus dem Regensburger Braunkohlenton.

Jahresber. Naturwiss. Ver. Regensburg, XII, Separ. Beil.-Bd., 1-35, pls. and text-figs.

A. O. U. 1910 A

Check-list of North American birds.

Prepared by a committee of the American Ornithologists' Union. Third edition (revised), 1-430 pages.

Anderson, C. 1925 A

The Australian fauna.

Roy. Soc. N. S. Wales, LIX, 15-34.

The bibliography contains 34 titles.

Anderson, Frank M. 1908 A

A further stratigraphic study in the Mount Diablo range of California.

Proc. Calif. Acad. Sci. (4), III, 1-40.

—— 1911 A

The Neocene deposits of Kern River, California, and the Temblor basin.

Proc. Calif. Acad. Sci. (4), III, 73-148, pls. ii-xiii.

Anderson, John 1879 A

Anatomical and zoological researches: Comprising an account of the zoological results of the two expeditions to western Yunnan in 1868 and 1875. London, 1878 (1879).

Vol. I, 357-564, pls. xxv-xliv.

Anderson, Netta C. 1905 A

A preliminary list of fossil mastodon and mammoth remains in Illinois and Iowa.

Augustana Lib. Pub., No. 5, 1-40, 2 maps.

Abstract in Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 305.

Anderson, Richard John 1898 A

Some notes on the manus of the dugong.

Jour. Anat. Physiol. Lond., XXXII, (n.s. XII), 765-767.

—— 1900 A

The dentition of the seal.

Rep. Brit. Assoc. Adv. Sci., 70th Meet., Bradford, 1900, 790-792.

—— 1901 A

The relationships of the premaxilla in bears.

Rep. Brit. Assoc. Adv. Sci., 71st Meet., Glasgow, 681-682.

—— 1902 A

A note on the premaxilla in some mammals.

Verh. internat. Zool.-Kongr., Berlin, in 1901, V, 1118-1127, 40 text-figs.

—— 1902 B

A note on the occipito-atloid articulation in some arctoids.

Jour. Anat., Physiol. Lond., XXXVI, (n.s., XVI), 368-371, 15 figs.

—— 1902 C

Some questions with reference to occipital condyles.

Brit. Med. Jour., 1902, II, 785.

—— 1903 A

The connection of the anterior inferior angle of the parietal bone in Primates.

Rep. Brit. Assoc. Adv. Sci., 72d Meet., Belfast, 1902, 651-652.

—— 1904 A

The premaxilla in Primates.

C. R. Congr. internat. Med., XIV, Madrid, 1903, Anat., 147-154, 29 text-figs.

—— 1905 A

Some considerations respecting the parietal bone.

Internat. Monatsschr. Anat. Physiol., XXI, 319-343, 83 text-figs.

Anderson, Richard John—Cont'd.

1908 A

The thickness of the skull in Mammalia.

Rep. Brit. Assoc. Adv. Sci., 77th Meet., Leicester, 1907, 546-547.

—— 1909 A

The maxilla and palatine in the Mammalia.

Rep. Brit. Assoc. Adv. Sci., 78th Meet., Dublin, 1908, 744-745.

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—— 1909 B

The epiphyses of long bones (chiefly in sauropsids).

Rep. Brit. Assoc. Adv. Sci., 78th Meet., Dublin, 1908, 745-746.

—— 1910 A

The occipital bone in Primates.

C. R. internat.-Congr. Méd., Budapest, 1909, XVI, sec. 1, 112-121, 7 figs.

See also Internat. Monatsschr. Anat. Physiol., XXVII, 1910, 73-83.

—— 1911 A

The temporal bone in Primates.

Rep. Brit. Assoc. Adv. Sci., 80th Meet., Sheffield, 1910, 639.

—— 1912 A

Some aspects of variation.

Verh. internat. Zool.-Kongr., Gratz, 1910, VIII, 914-921.

—— 1912 B

Note on the manus of a young Indian elephant.

Rep. Brit. Assoc. Adv. Sci., 81st Meet., Portsmouth, 1911, 428.

—— 1912 C

Some points in manus and pes of Primates.

Rep. Brit. Assoc. Adv. Sci., 81st Meet., Portsmouth, 1911, 429-430.

—— 1912 D

The mandible in Mammalia.

Proc. internat. zool. Congr., Boston, 1907, VII, 250-253.

Reprints may have been issued earlier.

—— 1912 E

The notes on the temporal bone in Mammalia (chiefly in Primates).

Verh. internat. Zool.-Kongr., Gratz, 1910, VIII, 907-914.

—— 1913 A

The skeletal elements of the extremities in Primates.

Internat. Congr. Med., London, Anat., Embr., XVII, pt. 2, 123-129.

Anderson, Richard John—Cont'd

1914 A

Some notes on the skeletal elements of the mammalian limb.

Rep. Brit. Assoc. Adv. Sci., 83d Meet., Birmingham, 1913, 533-534.

Andreæ, A. 1900 A

Review of O. Jaekel: Über *Hybodus* (Jaekel, O., 1898 B).

Neues Jahrb. Min. Geol. Pal., 1900, II, Ref., 470-472.

—— 1901 A

Abstracts of papers by Alban Stewart (Stewart, A., 1898 B; 1898 C; 1898 D).

Neues Jahrb. Min. Geol. Pal., 1901, I, Ref., 308-309.

—— 1901 B

Review of R. H. Traquair: Report on fossil fishes collected by the Geological Survey of Scotland in the Silurian rocks of the south of Scotland. (Traquair, R. H., 1899 A.)

Neues Jahrb. Min. Geol. Pal., 1901, I, Ref., 505-508, 4 figs.

—— 1901 C

Abstract of F. A. Lucas: Characters and relations of *Gallinuloides*, a fossil gallinaceous bird from the Green River shales of Wyoming. (Lucas, F. A., 1900 B.)

Neues Jahrb. Min. Geol. Pal., 1901, II, Ref., 474.

—— 1903 A

Review of H. F. Osborn: Reconsideration of the evidences for a common dinosaur-avian stem in the Permian. (Osborn, H. F., 1900 G.)

Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 149-152.

—— 1903 B

Abstract of O. P. Hay: Descriptions of some vertebrates of the Carboniferous age. (Hay, O. P., 1900 A.)

Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 442.

—— 1904 A

Review of F. B. Loomis: Die Anatomie und die Verwandtschaft der Ganoid- und Knochenfische aus der Kreideformation von Kansas, U. S. A. (Loomis, F. B., 1900 A.)

Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 308-310.

Andreæ, A.—Continued 1904 B

Abstract of F. A. Lucas: A new fossil cyprinoid, *Leuciscus turneri*, from the Miocene of Nevada. (Lucas, F. A., 1900 F.)

Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 461.

Andres, Jos. 1924 A

Untersuchungen über das Auftreten und die weitere Entwicklung der embryonalen Hirnschädelknochen des Schweines.

Morphol. Jahrb., LIII, 259-303, 19 figs.

There is a bibliography of 25 titles.

Andrews, C. W. 1896 B

Note on the pelvis of *Cryptoclidus oxoniensis* (Phillips).

Geol. Mag. (4), III, 145-148, fig.

—— 1901 A

Preliminary note on some recently discovered extinct vertebrates from Egypt.

Geol. Mag. (4), VIII, 400-409, 436-444, 8 figs.

—— 1902 A

Preliminary note on some recently discovered vertebrates from Egypt (part 3).

Geol. Mag. (4), IX, 291-295.

—— 1903 A

A preliminary notice of a land tortoise from the Upper Eocene of the Fayum, Egypt. With notes by H. J. Beadnell.

Survey Dep't, Public Works Ministry, 1-10 pages. Cairo; National Printing Dep't.

—— 1903 B

On the evolution of the Proboscidea.

Philos. Trans. Roy. Soc. Lond., CXCVI, B, 99-118, text-figs. 1-17.

Abstracts in Ann. Mag. Nat. Hist. (7), XI, 527-528; Geol. Mag. (4), X, 225; Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 318-320; Geol. Centralbl., V, 327; Proc. Roy. Soc. London, LXXI, 443-444; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 185-186.

—— 1903 C

Some suggestions on extinction.

Geol. Mag. (4), X, 1-2.

—— 1903 D

Diagram of the skull of *Mastodon angustidens*.

Rep. Brit. Assoc. Adv. Sci., 72d Meet., Belfast, 1902, 654.

Andrews, C. W.—Continued 1903 E

On the evolution of the Proboscidea.

Geol. Mag. (4), x, 225-226.

Originally published in Proc. Roy. Soc. Lond., LXXI, 443-444.

—— 1904 A

Further notes on the mammals of the Eocene of Egypt.

Geol. Mag. (5), I, 109-115, 2 text-figs; 157-162, pl. vi; 211-215.

—— 1906 A

A descriptive catalogue of the Tertiary Vertebrata of the Fayum, Egypt.

Pages i-xxvii+1-324, with frontispiece, pls. i-xxvi, and 98 text-figs., 4to., London.

Résumés in Neues Jahrb. Min. Geol. Pal., 1907, II, 307-317; Rev. crit. Paléozool., XI, 5-7; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 165-166; Nature, LXXIV, 175-178; Sci. Progress, I, 498; Geol. Mag. (5), III, 266-269.

—— 1907 A

Notes on the cervical vertebra of a zeuglodon from the Barton Clay of Barton Cliff (Hampshire).

Quart. Jour. Geol. Soc., LXIII, 124-127, 1 text-fig.

—— 1907 B

Notes on the osteology of *Ophthalmosaurus icenicus* Seeley, an ichthyosaurian reptile from the Oxford Clay of Peterborough.

Geol. Mag. (5), IV, 202-208, 5 text-figs.

For correction of some errors in this paper see Geol. Mag., V, 1908, 96.

Abstracts in Geol. Centralbl., X, 44; Sci. Progress, II, 516; Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 167.

—— 1907 C

The recently discovered Tertiary Vertebrata of Egypt.

Rep. Smithson. Instn., 1906 (1907), 295-307.

—— 1908 A

On the skull, mandible, and milk dentition of *Palæomastodon*, with some remarks on the tooth changes in the Proboscidea.

Philos. Trans. Roy. Soc. Lond., CXCIX, 393-407, pls. xxi-xxxii, text-figs. 1, 2.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 134-136; Rev. crit. Paléozool., XIII, 69, 70; Geol. Centralbl., XII, 149; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 35; Sci. Progress, III, 456.

—— 1908 B

Note on a model of the skull and mandible of *Prozeuglodon atrox* Andrews.

Geol. Mag. (5), V, 209-212, pl. ix.

Andrews, C. W.—Continued 1908 C

Model of the skull and mandible of *Prozeuglodon atrox* And.

Proc. Zool. Soc. Lond., 1908, 203.

A very brief note.

—— 1908 D

A guide to the elephants (recent and fossil) exhibited in the department of geology and palæontology in the British Museum (Natural History).

8vo., pages 1-46, 31 text-figs.

The author discusses the ancestral history of the Proboscidea.

—— 1909 A

Note on the mandible of a new species of *Tetrabelodon* from the Loup Fork beds of Kansas.

Geol. Mag. (5), VI, 347-349, figs. A-C.

Abstracts in Geol. Centralbl., XIII, 396; Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 138; Rev. crit. Paléozool., XIV, 7; Sci. Progress, IV, 662.

—— 1909 B

On some new Plesiosauria from the Oxford Clay of Peterborough.

Ann. Mag. Nat. Hist. (8), IV, 418-429, 7 figs.

Abstract in Sci. Progress, IV, 669.

—— 1909 C

The systematic position of *Mæritherium*.

Nature, LXXXI, 305.

—— 1910 A

A descriptive catalogue of the marine reptiles of the Oxford Clay. Based on the Leeds collection in the British Museum (Natural History), London, Part I.

Pages i-xxiv+1-205, with frontispiece, pls. i-x and 94 text-figs., 4to, London.

Abstracts in Science (2), XXXV, 84; Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 314-316; Sci. Progress, V, 684-685; Rev. crit. Paléozool., XV, 29-31; Geol. Centralbl., XVIII, 327-328; Geol. Mag. (5), VII, 564-567.

—— 1911 A

On the structure of the roof of the skull and of the mandible of *Peloneustes*, with some remarks on the plesiosaurian mandible generally.

Geol. Mag. (5), VIII, 160-164, 2 text-figs.

—— 1911 B

Description of a new plesiosaur (*Plesiosaurus capensis*, sp. nov.) from the Uitenhage beds of Cape Colony.

Ann. S. African Mus., VII, 309-322, pl. xviii, 4 text-figs.

Andrews, C. W.—Continued 1911 C

Origin of mammals.

Nature, LXXXVIII, 294.

—— 1912 A

On the importance of Africa in vertebrate palæontology.

Geol. Mag. (5), IX, 454-455.

—— 1913 A

A descriptive catalogue of the marine reptiles of the Oxford Clay. Based on the Leeds collection in the British Museum (Natural History), London. Part II.

Pages i-xxiv+1-206, with frontispiece, pls. i-xiii, 73 text-figs., 4to., London.

Abstracts in Geol. Mag. (5), X, 219-223; Science (2), XXXV, 84; Neues Jahrb. Min. Geol. Pal., 1913, II, Ref., 514-518. Rev. crit. Paléozool., XVII, 134-138.

—— 1913 B

On the skull and part of the skeleton of a crocodile from the Middle Purbeck of Swanage.

Ann. Mag. Nat. Hist. (8), XI, 485-494, pl. viii, 2 text-figs.

—— 1915 A

Note on a mounted skeleton of *Ophthalmosaurus icenicus* Seeley.

Geol. Mag. (6), II, 145-146, pl. v.

Abstract in Geol. Zentralbl., XXVI, 315.

—— 1916 A

Note on a mounted skeleton of a "gazelle-camel," *Stenomylus hitchcocki* Loomis.

Geol. Mag. (6), III, 1-2, pl. i.

Abstracts in Rev. crit. Paléozool., XXI, 133; Geol. Zentralbl., XXVI, 379.

—— 1916 B

Note on the sternum of a large carinate bird from the (?)Eocene of southern Nigeria.

Proc. Zool. Soc. Lond., 1916, 519-524, figs. 1-4.

—— 1916 C

Review of W. D. Matthew's "Mammoths and mastodons."

Ann. Mag. Nat. Hist. (6), III, 128.

—— 1916 D

Discussion on the "Biologia Centrali-Americana."

Proc. Zool. Soc. Lond., 1916, 548-549.

—— 1917 A

A gigantic Eocene bird.

Geol. Mag. (6), IV, 469-470. A review of Matthew and Granger on *Diatryma*.

Abstract in Geol. Zentralbl., XXIII, 445.

Andrews, C. W.—Continued 1919 A

A description of a new species of zeuglodont and of leathery turtle from the Eocene of Southern Nigeria.

Proc. Zool. Soc. Lond., 1919, 309-319, pls. i, ii, 3 text-figs.

—— 1921 A

On a new chelonian from the Kimmeridge Clay of Swindon.

Ann. Mag. Nat. Hist. (9), VII, 145-153, 3 figs.

—— 1921 B

Note on a skull of *Dinotherium giganteum* in the British Museum.

Proc. Zool. Soc. Lond., 1921, 525-534, 4 figs.

—— 1921 C

On some remains of a theropodous dinosaur from the Lower Lias of Barrow-on-Soar.

Ann. Mag. Nat. Hist. (9), VIII, 570-576, 2 figs.

—— 1922 A

Description of a new plesiosaur from the Weald Clay of Berwick (Sussex).

Quart. Jour. Geol. Soc., LXXVIII, 285-298, pls. xiv, xv, 2 figs.

—— 1922 B

A guide to the elephants (recent and fossil) exhibited in the department of geology and palæontology in the British Museum (Natural History).

Pages 1-48, 30 figs.

—— 1923 A

Note on the skulls from which the endocranial casts described by Dr. Dart were taken.

Proc. Zool. Soc. Lond., 1923, 648-652, text-figs. 22-24.

—— 1923 B

Exhibition of a phalageal bone of one of the *Ancylopoda* from Uganda.

Proc. Zool. Soc. Lond., 1923, 1095.

—— 1923 C

Note on the skull and mandible of a Siberian mammoth exhibited in the British Museum.

Ann. Mag. Nat. Hist. (9), XII, 322-325, 544, pl. x.

—— 1924 A

On some similarities in the evolution of the dentition in the Sirenia and the Proboscidea.

Ann. Mag. Nat. Hist. (9), XIII, 304-309.

Andrews, C. W.—Continued 1924 B
Note on an ichthyosaurian paddle showing traces of soft tissues.
Proc. Zool. Soc. Lond., 1924, 533-537, pl. 1, 2 text-figs.

Andrews, E. B. 1874 A
Report on the geology of Washington County [Ohio].
Geol. Surv. Ohio, II, pt. i, Geol., 453-508.

Andrews, Roy Chapman 1914 A
The California gray whale (*Rhachianectes glaucus* Cope): Its history, habits, osteology and systematic relationship.
Ann. N. Y. Acad. Sci., XXII, 289-290.

—— 1916 A
The Sei whale (*Balænoptera borealis* Lesson). History, habits, external anatomy, osteology, and relationships.
Mem. Amer. Mus. Nat. Hist. (n.s.), I, pt. vi, 291-388, pls. xxix-xlii, 38 text-figs.

—— 1921 A
A remarkable case of external hind limbs in a humpback whale.
Amer. Mus. Novitates, No. 9, 1-6, 4 figs.

Anonymous 1821 A
Gehörknochen im Fische.
Isis von Oken, 1821, 272-277, pl. iv. (Subscribed "Anonymus.")

—— 1854 A
Discovery of mastodon at Poughkeepsie, N. Y.
Amer. Jour. Sci. (2), XVIII, 447.

—— 1868 A
A brief notice of the restored skeleton of the great herbivorous lizard *Hadrosaurus* in the Museum of the Academy of Natural Sciences [of Philadelphia].
A pamphlet of 12 pages, probably intended for visitors.

—— 1871 A
Donation of skull of *Taxidea* from asphalt beds near Los Angeles.
Proc. Calif. Acad. Sci. (1), IV, 139.

—— 1878 A
American Jurassic dinosaurs.
Nature, XIX, 76.
Abstract of Marsh, O. C., 1878 F.

—— 1879 A
The home of the mastodon.
Kansas City Rev. Sci. Indust., III, 263-266.
Quoted from the "New York World."

Anonymous—Continued 1880 A
Sternum in dinosaurs.
Nature, XXII, 113.
Abstract of Marsh, O. C., 1880 D.

—— 1880 B
The toothed birds of Kansas.
Nature, XXII, 557-558.
Review of Marsh, O. C., 1880 G.

—— 1897 A
The origin of the edentate mammals. The South American edentate mammals. The Old World edentate mammals.
Nat. Sci., XI, 150-153.

—— 1897 B
The classification of rodents.
Nat. Sci., X, 367-368.
A criticism of Thomas, O., 1896 A.

—— 1898 A
Review of A. S. Woodward's "Outlines of Vertebrate Palæontology" (Woodward, A. S., 1898 B).
Geol. Mag. (4), V, 367-373.

—— 1898 B
Review of H. F. Osborn's "The Extinct Rhinoceroses."
Geol. Mag. (4), V, 374-375.

—— 1898 C
Notes and comments.
Nat. Sci., XII, 74 (The deep-sea shark *Chlamydoselache*); 85 (A Devonian fish-spine).

—— 1903 A
A Siberian mammoth.
Scient. Amer., LXXXIX, 390, 1 text-fig.
Quoted from The Sphere.

—— 1904 A
Mastodon at Belvidere, N. Y.
Amer. Geologist, XXXIII, 60.

—— 1904 B
Model of the four-toed horse.
Amer. Mus. Jour., IV, 40-41.

—— 1905 A
The brontosaur. How a giant prehistoric animal was discovered, transported and restored.
Scient. Amer., XCII, 42-43, 2 text-figs.
A popular account of methods employed.

—— 1905 B
Notice of papers on American fossil reptiles.
Nature, LXXIII, 205.

—— 1905 C
The new *Diplodocus* skeleton.
Nature, LXXII, 82-83, 1 text-fig.

Anonymous—Continued 1905 D

The presentation of a reproduction of *Diplodocus carnegei* to the trustees of the British Museum.

Ann. Carnegie Mus., III, 443-452, pls. xvii, xviii.

—— 1905 E

Diplodocus carnegiei.

Geol. Mag. (5), II, 576, pl. xxv.

—— 1905 F

Prof. Lankester's "Extinct Animals."

Nature, LXXIII, 6-7, 2 figs.

—— 1906 A

The Warren mastodons.

Science (n.s.), XXIII, 199.

—— 1906 B

[Fossil vertebrates received by American Museum of Natural History.]

Science (n.s.), XXIII, 228.

—— 1906 C

[Fossil bison from Yukon in Carnegie Museum.]

Science (n.s.), XXIV, 711.

—— 1906 D

[The paleontological expedition of the Carnegie Museum.]

Science (n.s.), XXIV, 711-712.

—— 1906 E

New dinosaurs.

Knowl. Scient. News (n.s.), III, 411.

—— 1907 A

The skeleton of the Columbian mammoth.

Amer. Mus. Jour., VII, 5-6.

—— 1907 B

The *Naosaurus*, or ship-lizard.

Amer. Mus. Jour., VII, 36-41, 2 figs.

—— 1907 C

The Warren mastodon.

Amer. Mus. Jour., VII, 91-92, 1 plate.

—— 1908 A

[*Orohippus osbornianus* Cope in the American Museum of Natural History.]

Science (n.s.), XXVIII, 723.

—— 1908 B

Exhibit illustrating the evolution of the horse.

Amer. Mus. Jour., VII, 117-122, 5 figs.

—— 1908 C

Mammoth hunting in Alaska.

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A new fossil horse, *Hypohippus matthewi*.

Neb. Geol. Surv., IV, 169-173, pls. i, ii, 1 text-fig.

See also Univ. [Neb.] Studies, XIV, 197-199, pl. xiv.

—— 1914 B

Mammalian fossils from Devil's Gulch.

Neb. Geol. Surv., IV, 177-190, pls. i-xiii.

See also Univ. [Neb.] Studies, XIV, 185-197, pls. i-xiii.

—— 1914 C

A new longirostral mastodon from Cherry County, Nebraska.

Neb. Geol. Surv., IV, 213-322, pls. i-vi, 6 text-figs.

—— 1915 A

A new longirostral mastodon. *Tetrabelodon lulli*. Preliminary notice.

Amer. Jour. Sci. (4), XXXIX, 87-92, 2 figs.

Barbour, Erwin H.—Continued 1915 B

A new Nebraska mammoth, *Elephas hayi*.

Amer. Jour. Sci. (4), XL, 129-134, 5 text-figs.

Abstract in Geol. Zentralbl., XXV, 271.

—— 1915 C

A new mount of the fossil tortoise, *Testudo orthopygia*.

Neb. Geol. Surv., IV, 335-336, 2 text-figs.

—— 1916 A

A giant Nebraska bear, *Dinarctotherium merriami*.

Neb. Geol. Surv., IV, 349-353, 6 figs.

—— 1916 B

Evidence of the ligamentum teres in Nebraska Proboscidea.

Amer. Jour. Sci. (4), XLI, 251-254, 6 figs.

Abstract in Geol. Zentralbl., XXV, 270.

—— 1916 C

A new longirostral mastodon from Nebraska, *Tetrabelodon osborni*.

Amer. Jour. Sci. (4), XLI, 522-529, 4 figs.

Abstract in Geol. Zentralbl., XXV, 270.

—— 1917 A

The Boyd County mastodon *Tetrabelodon osborni*.

Neb. Geol. Surv., IV, 499-512, 12 figs.

—— 1924 A

A preliminary report on the Nebraska State Museum.

Bull. Neb. State Mus., I, No. 1, 1-19, 6 figs.

—— 1925 A

A new primitive mammoth from Nebraska.

Bull. Neb. State Mus., I, No. 2, 21-24, figs. 7-12.

—— 1925 B

Prosthennops xiphodonticus sp. nov. A new fossil peccary from Nebraska.

Bull. Neb. State Mus., I, No. 3, 25-31, figs. 12, 13.

—— 1925 C

Tetrabelodon abeli sp. nov.

Bull. Neb. State Mus., I, No. 9, 91-94, figs. 52-57.

—— 1925 D

Skeletal parts of the Columbian mammoth, *Elephas maibeni* sp. nov.

Bull. Neb. State Mus., I, No. 10, 95-118, figs. 58-87.

—— 1926 A

Archidiskodon maibeni.

Bull. Neb. State Mus., I, 119-122, fig. 88.

Barbour, Erwin H.—Continued 1927 A
Preliminary notice of a new proboscidean, *Amebelodon fricki* gen. et sp. nov.
Bull. Neb. State Mus., I, No. 13, 131-134, figs. 89-91.

——, and Harold J. **Cook** 1914 A
Two new fossil dogs of the genus *Cynarctus* from Nebraska.
Neb. Geol. Surv., IV, 225-227, pl. i, 1 text-fig.

—— 1914 B
A new saber-toothed cat from Nebraska.
Neb. Geol. Surv., IV, 235-238, pl. i, 4 text-figs.

—— 1917 A
Notes on the skull of *Metoreodon*.
Neb. Geol. Surv., VII, pt. 18, 165-172, 8 text-figs.

—— 1917 B
Skull of *Ælurodon platyrhinus* sp. nov.
Neb. Geol. Surv. VII, pt. 19, 173-180, 11 text-figs.

Barbour, Thomas 1916 A
Remarks upon Matthews' "Climate and Evolution."
Ann. N. Y. Acad. Sci. XXVII, 1-15. Followed by supplementary note by W. D. Matthew.

—— 1926 A
A note on Tertiary alligators.
Copeia, No. 151, 109-111.

——, and G. M. **Allen** 1922 A
The white-tailed deer of eastern United States.
Jour. Mamm., III, 65-78, pls. iv, v.
There is a bibliography of 15 titles.

Bárcena, Mariano 1882 A
El Museo nacional de Mexico; seccion de geología y paleontología.
Revista cient. Mexicana, I, No. 20, 20.

Bardeen, Charles R. 1905 A
The development of the thoracic vertebræ in man.
Amer. Jour. Anat., IV, 163-174, pls. i-vii.
There is a bibliography of 29 titles.

—— 1905 B
Studies of the development of the human skeleton.
Amer. Jour. Anat., IV, 265-302, pls. i-xii.
There is a bibliography of 74 titles. The paper treats of the spinal column and the posterior limbs.

Bardeleben, K. 1885 A
Zur Entwickelung der Fusswurzel.
Jena. Zeitschr. Naturwiss. Suppl., XIX, 27-32.

—— 1885 B
Zur Morphologie des Hand- und Fusskelets.
Jena. Zeitschr. Naturwiss. Suppl., XIX, 84-88.

—— 1885 C
Ueber neue Bestandteile der Hand- und Fusswurzel der Säugethiere, sowie die normale Anlage von Rudimenten "überzähliger" Finger und Zehen beim Menschen.
Jena. Zeitschr. Naturwiss. Suppl., XIX, 149-166.

—— 1889 A
Praepollex und praehallux.
Anat. Anz., IV, Ergänzungsh., 106-112, 6 text-figs.

—— 1889 B
On the praepollex and praehallux, with observations on the carpus of *Theriodesmus phylarchus*.
Proc. Zool. Soc. Lond., 1889, 259-262, pl. XXX.

—— 1893 A
Knochen, Bänder, Muskeln.
Anat. Hefte, Ergebn., II, 156-178.
A review of the literature. A list of 75 works on the subject is included.

—— 1896 A
Knochen, Bänder, Muskeln.
Anat. Hefte, Ergebn., V, 95-126.
A review of the literature. There is a bibliography of 318 titles.

—— 1901 A
Skelettsystem (ausser Schädel und Visceralskelett).
Anat. Hefte, Ergebn., X, 1-114.
This paper is preceded by a bibliography of 290 titles.

—— 1903 A
Skeletsystem ausser Kopf (einschliesslich Gelenke und Gelenkmechanik).
Anat. Hefte, Ergebn., XII, 3-41.
A résumé of progress; preceded by a bibliography of 189 titles.

—— 1904 A
Skelet ausser Kopf (einschliesslich Gelenke und Gelenkmechanik). Literatur 1903.
Anat. Hefte, Ergebn., XIII, 95-114.
This résumé of progress is preceded by a bibliography of 70 titles.

Bardeleben, K.—Continued 1905 A

Die Homologie des Unterkiefers in der Wirbeltierreihe.

Anat. Anz. Ergänzungsh., XXVII, 16.

A brief note, followed by brief discussions. See also C. R. Assoc. Anat., 1905, VII, 140; Verh. Anat. Ges., XIX, 16-17.

—— 1905 B

Die Nicht-Homologie des Unterkiefers in der Wirbeltierreihe.

Anat. Anz. Ergänzungsh., XXVII, 138-139.

—— 1905 C

Über den Unterkiefer der Säugetiere.

Sitz.-Ber. Ges. naturf. Freunde Berlin, 1905, 156-159.

—— 1905 D

Spezielle Anatomie und Entwicklungsgeschichte des Menschen und der Wirbeltiere. IV: Skeletsystem. B. Chorda dorsalis, Wirbelsaule, Rippen, Sternum.

Jahresber, Anat. Entwickl. (N.F.), X, Abth. 3, 92-101.

On page 92 is presented a list of the papers reviewed on the succeeding pages.

—— 1905 E

Der Unterkiefer der Säugetiere, besonders des Menschen.

Anat. Anz., XXVI, 104-111.

—— 1906 A

Skelet (ausser Schädel und Viszeralskelet). 1904 und 1905.

Anat. Hefte, Ergebn., XV, 119-151.

This review is preceded by a bibliography of 118 titles.

—— 1907 A

Zur vergleichenden Anatomie, besonders Paläontologie des Unterkiefers der Wirbeltiere.

Anat. Anz., Ergänzungsh., XXX, 34-37.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 37.

—— 1907 B

Skelet (ausser Kopf) and Muskeln.

Anat. Hefte, Ergebn, XVI, 141-165.

The bibliography consists of 69 titles.

—— 1909 A

Ueber bilaterale Asymmetrie beim Menschen und bei höheren Tieren.

Anat. Anz., Ergänzungsh., XXXIV, 2-72.

The bibliography is recorded in pages 63-72.

Bardenfleth, K. S. 1913 A

Notes on the form of the carnassial tooth of carnivorous mammals. (With a critical sketch of the most important tooth-cusp theories.)

Vid. Medd. nat. For. Kjobenh., LXV, 67-111, 15 text-figs.

With a list of about 50 papers.

Abstracts in Sci. Progress, VIII, 630; Nature, XCI, 595.

Barkas, T. P. 1869 A

Climaxodus ovatus and *Diplodus.*

Geol. Mag., VI, 42.

—— 1869 B

Unusual forms of *Ctenoptychius.*

Geol. Mag., VI, 43, 2 text-figs.

Barkas, W. J. 1874 B

Hybodus, a Coal-measure fish.

Geol. Mag. (n.s.), I, 163-168, 239, 6 text-figs.

—— 1874 C

Hybodus, a Coal-measure fish.

Geol. Mag. (n.s.), I, 287-288.

—— 1874 D

List of Palæozoic fishes.

Geol. Mag. (n.s.), I, 542-553.

Barney, R. L., and B. J. Anson 1923 A

Life history and ecology of the orange-spotted sunfish, *Lepomis humilis.*

Rep. U. S. Comm. Fish., 1922 (1923), app. 15 (Doc. 938), 1-16, 7 figs.

Barrell, Joseph 1907 A

Origin and significance of the Mauch Chunk shale.

Bull. Geol. Soc. Amer., XVII, 449-476, pls. xlix-lii, 1 text-fig.

—— 1915 A

Factors in movements of the strand line and their results on the Pleistocene and post-Pleistocene.

Amer. Jour. Sci. (4), XL, 1-22.

Abstract in Jour. Wash. Acad. Sci., V, 413-420.

—— 1915 B

Influence of Silurian-Devonian climates on the rise of air-breathing vertebrates.

Bull. Geo. Soc. Amer., XXVII, 387-436, 2 text-figs.

—— 1917 A

Probable relations of climatic change to the origin of the Tertiary ape-man.

Scient. Monthly, IV, 16-26.

Barrett-Hamilton, G. E. H. 1897 A
The Pacific walrus (*Trichechus obesus*).
Proc. Zool. Soc. Lond., 1897, 266-267.
This refers to *Odobenus divergens*.

Barrows, Walter B. 1885 A
Natural history of birds: Hawks, owls.
Stand. Nat. Hist., III, 260-348, figs. 124-157.

Barton, Benjamin Smith 1805 A
Letter to M. Lacépède of Paris, on the natural history of America.
Tilloch's Philos. Mag, XXII, 97-193, 204-211.

—— 1805 B
[On the *Megalonyx* of Mr. Jefferson.]
Phila. Med., Phys. Jour. I, pt. i, 152-154.

—— 1805 C
On the mammoths found at Big Bone Lick.
Phila. Med., Phys. Jour., I, pt. i, 154-159.

—— 1805 D
[Remarks on a communication from Mr. John Heckewelder regarding *Megalonyx*.]
Phila. Med., Phys. Jour., I, pt. ii, 164-165.

—— 1806 A
Facts, observations, and conjectures relative to the elephantine bones (of different species) that are found in various parts of North America. In a letter from the Editor to Mr. G. Cuvier, of Paris.
Phila. Med., Phys. Jour. First supplement, 22-34, with notes on this letter, 34-35.
Forms a part of the Archæologia Americana.

—— 1806 B
(Regarding specimens of mammoth).
Phila. Med., Phys. Jour., II, pt. i, 157.

—— 1806 C
[Remarks on skull of peccary from saltpeter cave in Kentucky.]
Phila. Med., Phys. Jour., II, pt. i, 158.

—— 1810 A
[Letter from Doctor Barton to Thomas Jefferson.]
The Portfolio, Philadelphia, (3) IV, 340-344.
The writer discusses the generic position of the mastodon of Ohio.

—— 1814 A
Archæologia Americanæ telluris collectanea et specimina.
Part I, Phila., 1814, 8vo., i-viii, 10-64.

Bassani, Francesco 1890 A
Colonna vertebrale di *Oxyrhina mantelli* Agassiz, scoperta nel Calcare Senoniano di Castellavazzo nel Bellunese.
Mem. Soc. ital. Sci. (3), VII, Mem. 1, 1-6, 3 pls.
This paper may have been issued in 1888 as a separate.

—— 1891 A
Contributo alla paleontologia della Sardegna ittioliti miocenici.
Atti Accad. Sci. Napoli (2), IV, No. 3, i-viii+1-60, pls. i, ii.
A bibliography occupies pages iii-viii.
There are full synonymies of the species.

—— 1895 A
Avanzi di *Carcharodon auriculatus* scoperti nel Calcare eocenico di Valle Gallina presso Avesa (provincia di Verona).
Mem. Accad. Agric., Verona, LXXI, 1-13, 1 plate.
Abstract in Neues Jahrb. Min. Geol. Pal., Ref., 527.

—— 1899 A
Abstract in Geol. Mag. (3), VIII, 476.

—— 1901 A
Il *Notidanus griseus* Cuvier nel Pliocene della Basilicata e di altre regione italiane e straniere.
Rend. Accad. Sci., Napoli (3), VII, 175-180, 1 fig.
Brief notice in Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 315.

—— 1905 A
La ittiofauna delle argille marnose plistoceniche di Taranto e di Nardo (Terra d'Otranto).
Atti Accad. Sci. Napoli (2), XII, No. 3, 1-59, i-iii.
The bibliography is recorded on pages 3 to 8.

Bassler, Ray S. 1919 A
Report on work in paleontology.
Rep. U. S. Nat. Mus., 1918 (1919), 60-62.

Bassoli, G. G. 1906 A
Otoliti fossili tertiari dell' Emilia.
Riv. ital. Pal., XII, 36-58, pls. i, ii.
Citations of the literature in foot-notes.

Bate, Dorothea M. A. 1914 A
On remains of a gigantic land tortoise (*Testudo gymnesicus* n. sp.) from the Pleistocene of Menorca.
Geol. Mag. (6), I, 100-107, 2 text-figs.

Batelli, Andrea 1880 A
Beiträge zur Kenntniss des Baues der Reptilien.
Arch. mikr. Anat. Bonn, XVII, 346-361, pls. XXXIV, XXXV.

Bateson, W. 1892 A
On numerical variation in teeth, with a conception of homology.
Proc. Zool. Soc. Lond., 1892, 102-115, 6 figs.

Bauer, Franz 1901 A
Ichthyosaurus bambergensis spec. nov. Beschreibung einer neuen *Ichthyosaurus*-Art aus dem oberen Lias von Geisfeld, nebst einigen vergleichend-anatomischen Bemerkungen über den Schultergürtal.
Ber. naturf. Ges. Bamberg, XVIII, 1-56, pls. i, ii.

Baum, Hermann 1920 A
Anatomische Betrachtungen über die Zähne des Säugetiere.
Verh. Anat. Ges., XXIX, 17-27, figs. 1-19.

Baumgarten, [Hans] 1892 A
Beiträge zur Entwicklungsgeschichte der Gehörknöchelchen.
Arch. mikr. Anat. Bonn., XL, 512-530, pl. XXX.

Baur, Georg 1885 L
Preliminary note on the origin of limbs.
Amer. Naturalist, XIX, 1112.

—— 1885 M
Einige Bemerkungen über die Ossification der "langen" Knochen.
Zool. Anz., VIII, 580-581.

—— 1885 N
Zum Tarsus der Vögel.
Zool. Anz., VIII, 488.

—— 1886 N
Das Trapezium der Cameliden.
Morphol. Jahrb., VII, 117-118.

—— 1886 O
The intercentrum of living Reptilia.
Amer. Naturalist, XX, 174-175.

—— 1887 G
Remarks on *Hyperodapedon*, etc.
Quart. Jour. Geol. Soc., XLIII, 694.

—— 1887 H
Ueber das Quadratum der Säugethiere.
Sitz.-Ber. Ges. Morphol. Physiol. München., II, 45-57.
Same as Baur, G., 1886 A. See also Quart. Jour. Micr. Sci. (n.s.), XXVIII, 169-180.

Baur, Georg—Continued 1888 A
Dermochelys, Dermatochelys oder *Sphargis.*
Zool. Anz., XI, 44-45.

—— 1889 L
Palæohatteria Credner and the *Proganosauria.*
Amer. Jour. Sci. (3), XXXVII, 310-313.

—— 1890 F
Kadaliosaurus priscus Credner, a new reptile from the Lower Permian of Saxony.
Amer. Jour. Sci. (3), XXXIX, 156-158.

—— 1891 E
On the relations of *Carettochelys* Ramsay.
Amer. Naturalist, 631-638.

—— 1891 F
Intercalation of vertebræ.
Jour. Morphol; IV, 331-336.

—— 1892 D
Der Carpus der Schildkröten.
Anat. Anz., VII, 206-211, figs. 1-4.

—— 1893 D
Ueber Rippen und ähnliche Gebilde und deren Nomenclatur.
Anat. Anz., IX, 116-120.
13 titles in foot-notes.

—— 1894 B
Ueber den Proatlas einer Schildkröte (*Platypeltis spinifer* Les.).
Anat. Anz., X, 349-354, figs. 1-6.
The bibliography includes 30 titles.

—— 1896 D
Der Schädel einer neuen grossen Schildkröte (*Adelochelys*) aus dem Zoologischen Museum in München.
Anat. Anz., XII, 314-319, 4 figs.

—— 1896 E
Nachtrag zu meiner Mitteilung über die Morphologie des Unterkiefers der Reptilien.
Anat. Anz., XI, 569.
Relates to Baur G., 1895 D.

—— 1896 F
Historische Bemerkungen.
Internat. Monatsschr. Anat. Physiol., III, Heft. 1.
Reviews Paul Gervais' "Théorie du squelette humain," etc., 1886.

—— 1897 D
Remarks on the question of intercalation of vertebræ.
Zool. Bull., I, 41-55.

—— 1897 E
Amphibia or Batrachia.
Science (n.s.), VI, 170-174.

Baur, Georg—Continued 1897 F
Amphibia or Batrachia.
Science (n.s.), VI, 372.

—— 1898 A
Review of G. A. Boulenger: "On a nothosaurian reptile," etc.
Neues Jahrb. Min. Geol. Pal., 1898, I, Ref., 146-149.

Bayer, Franz 1897 A
Sur le tentorium osseum chez les mammifères.
Bibl. Anat., V, 147-150, pls. i, ii.

—— 1908 A
Neue Reste der Gattung *Portheus* Cope (*Xiphactinus* Leidy) aus der böhmischen Kreide.
Trans. Bohem. Acad. Sci., XVII, art. 19, 1-11, 1 pl., 4 text-figs.
Rozpr. Cheské Ak. Frant. Jos., 1908 (12), 1 pl.
Title and text in Bohemian.

—— 1909 A
Neue Reste von *Portheus* Cope (*Xiphactinus* Leidy) aus dem böhmischen Turon.
Bull. internat. Acad. Sci., Prague, XIV, 98-103, pl., 4 text-figs.

Bayley, W. S., H. B. **Kümmel,** and R. D. **Salisbury** 1914 A
Description of the Raritan [N. J.] quadrangle.
Folio No. 191, U. S. Geol. Surv., 1-33, 5 maps, 21 text-figs.

Bean, Barton A. 1904 A
Notes on an adult goblin shark (*Mitsukurina owstoni*) of Japan.
Proc. U. S. Nat. Mus., XXVIII, 815-818, 2 text-figs.

Beard, J. Carter 1901 A
Three characteristic types of American dinosaurs.
Scient. Amer. LXXXIV, 184-185, one figure.

—— 1901 B
Something about ancient American saurians.
Scient. Amer., LXXXV, 267, one figure.
A brief note in Geol. Centralbl., III, 118.

Beasley, Walter L. 1903 A
Evolution of the horse.
Scient. Amer., LXXXVIII, 451-452, 4 text-figs.

—— 1903 B
A remarkable fossil discovery.
Scient. Amer., LXXXIX, 87, 3 text-figs.
Abstract in Geol. Centralbl., IX, 400.

Beasley, Walter L.—Continued 1907 A
Naosaurus: A fossil wonder.
Scient. Amer., XCVI, 368, 6 text-figs.
A popular account of *Naosaurus*.

—— 1907 B
Diplodocus: The greatest of all earthly creatures.
Scient. Amer., XCVI, 491-492, 7 text-figs.
A popular account of *Diplodocus*, with a restoration, on page 485, by Charles R. Knight.

—— 1907 C
The greatest of mastodons.
Scient. Amer., XCVII, 103-104, 5 text-figs.

—— 1907 D
A carnivorous dinosaur: A reconstructed skeleton of a huge saurian.
Scient. Amer., XCVII, 446-447, 6 text-figs.

Beaumont, Élie 1872 A
Sur une dent d'*Elephas primigenius* trouvée dans l'Alaska.
C. R. Acad. Sci. Paris, LXXV, 1282.

Becker, George F. 1888 A
Pliocene and Post-pliocene strata at Clear Lake, Lake County, California.
Mon. U. S. Geol. Surv., XIII, 219-221.

—— 1891 A
Antiquities from under Tuolumne Table Mountain in California.
Bull. Geol. Soc. Amer., II, 189-198, pl. vii, 1 text-fig.

Beddard, Frank Evers 1888 B
On the classification of the *Striges*.
Ibis (5), VI, 335-344, 7 figs.

—— 1893 A
On certain points in the anatomy of parrots bearing on their classification.
Proc. Zool. Soc. Lond., 1893, 507-514, pl. xl.

—— 1896 A
On the anatomy of a grebe (*Æchmophorus major*) with remarks on the classification of some of the schizognathus birds.
Proc. Zool. Soc. Lond., 1896, 538-547, 7 figs.

—— 1897 B
Notes upon the anatomy of a manatee (*Manatus inunguis*).
Proc. Zool. Soc. Lond., 1897, 47-53, 6 figs.

—— 1898 A
The structure and classification of birds.
8vo., i-xx+1-548 pages, 252 text-figs.

Beddard, Frank Evers—Cont'd. 1899 A
On the brain of *Hydrochœrus*.
Proc. Zool. Soc. Lond., 1899, 798-803, 5 figs.

—— 1900 A
A book of whales.
8vo., i-xv+1-320 pages, 40 illustrations.

—— 1901 A
Contribution towards a knowledge of the osteology of the pigmy whale (*Neobalœna marginata*).
Trans. Zool. Soc. Lond., XVI, 87-114, pls. vii-ix.

—— 1902 A
Mammalia.
The Cambridge Natural History, 8vo., x, i-xii+1-605 pages, 285 text-figs.
Reviewed in Nature, LXVI, 373-375.

—— 1904 A
A note upon the tongue and windpipe of the American vultures, with remarks on the interrelations of the genera *Sarcorhamphus, Gypagus,* and *Cathartes*.
Proc. Zool. Soc. Lond., 1903, II, 386-392, 4 text-figs.

—— 1904 B
"Abdominal ribs" in Lacertilia.
Nature, LXX, 6.

—— 1904 C
Preliminary note on certain points in the anatomy of *Eryx* and other Boidæ, partly indicative of their basal position among the Ophidia.
Ann. Mag. Nat. Hist. (7), XIII, 233-236.

—— 1905 A
The rudimentary hind limbs of the boine snakes.
Nature, LXXII, 630.

—— 1907 A
Contributions to the knowledge of the systematic arrangement and anatomy of certain genera and species of Squamata.
Proc. Zool. Soc. Lond., 1907, 35-68, text-figs. 10-19.

—— 1919 A
Further contributions to the anatomy of the sperm whale (*Physeter macrocephalus*) based upon an examination of two additional fœtus.
Ann. Durban Mus., II, 129-148, pl. xxiii, 13 text-figs.

—— 1923 A
On the blow-holes and nasal passages of the cachalot.
Ann. Mag. Nat. Hist. (9), XI, 641-655.

Beddard, Frank Evers—Cont'd. 1923 B
Some observations upon the development of the teeth of *Physeter macrocephalus*.
Quart. Jour. Micr. Sci., LXVII, 1-32, 13 text-figs.
The bibliography presents 10 titles.

Bédé, P. 1921 A
Review of O. P. Hay's "Vertebrata mostly from stratum No. 3 at Vero, Florida," etc.
Rev. crit. Paléozool., XXV, 15.

Beebe, C. W. 1906 A
The bird: Its form and function.
8vo., i-xii+1-496 pages, over 300 illustrations.
Review in Nature, LXXVI, 1907, 489.

—— 1915 A
A tetrapteryx stage in the evolution of birds.
Ann. N. Y. Acad. Sci., XXVI, 447.

—— 1915 B
A tetrapteryx stage in the ancestry of birds.
Zoologica (N. Y. Zool. Soc.), II, 39-52, figs. 7-11.

Beecher, Charles E. 1902 A
The reconstruction of a Cretaceous dinosaur, *Claosaurus annectens* Marsh.
Trans. Conn. Acad. Arts, Sci., XI, 311-324, pls. xli-xlv, 6 text-figs.
Abstracts in Geol. Centralbl., IV, 300; Rev. crit. Paléozool, VI, 177.

Beechey, Frederick William 1831 A
Narrative of a voyage to the Pacific and Beering's Strait, to cooperate with the polar expedition performed in his majesty's ship *Blossom*, under the command of Captain F. W. Beechey, R. N. [etc.], in the years 1825, '26, '27, '28. In two parts.
i-xxii+1-590 pages; followed by Buckland's description of fossils.

Beecker, Adolf 1903 A
Vergleichende Stilistik der Nasenregion bei den Sauriern, Vögeln und Säugethieren.
Morphol. Jahrb., XXXI, 565-619, pls. xxii-xxiv.
There is presented a bibliography of 28 titles.

Beede, J. W. 1907 A
Invertebrate paleontology of the Upper Permian Red Beds of Oklahoma and the Panhandle of Texas.
Kansas Univ. Sci. Bull., IV, 115-171.
This paper discusses the geological relations of the Permian in Texas.

Beede, J. W.—Continued 1922 A

Age and development of Red Beds and terrestrial vertebrates of the Appalachian and Kansan-Texas sections.

Bull. Geol. Soc. Amer., XXXIII, 671-688.

Beer, G. Rylands de 1922 A

The segmentation of the head in *Squalus acanthias*.

Quart. Jour. Micr. Sci. (n.s.), LXVI, 457-474, 13 figs.

The bibliography presents 19 titles.

—— 1924 A

The proötic somites of *Heterodontus* and of *Amia*.

Quart. Jour. Micr. Sci. (n.s.), LXVIII, 17-38, 16 figs.

There are listed 12 titles in the bibliography.

—— 1924 B

Contributions to the study of the development of the head in *Heterodontus*.

Quart. Jour. Micr. Sci. (n.s.), LXVIII, 39-65, 21 figs.

In the bibliography are listed 18 titles.

—— 1924 C

Studies on the vertebrate head. I: Fish.

Quart. Jour. Micr. Sci., LXVIII, 287-341, 42 figs.

The bibliographic list contains 33 titles.

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Contributions to the development of the skull in the sturgeons.

Quart. Jour. Micr. Sci., LXIX, 671-687, 20 figs.

The bibliography records 12 titles.

—— 1926 A

Studies on the vertebrate head. II: The orbito-temporal region of the skull.

Quart. Jour. Micr. Sci., LXX, 263-370, 133 figs.

The bibliography occupies pages 367-370.

Behlen, H. 1906 A

Über das Milchgebiss der Paarhufer. I Teil: Literaturgeschichtliches.

Jahrb. Nassau. Ver. Naturk., LIX, 185-212.

A discussion of the principles advanced in the works of Rütimeyer, Kowalevsky, Schlosser, Pavlow, Scott, Zittel, Ameghino and Stehlin.

Abstracts in Geol. Centralbl., XII, 514; XIV, 338.

—— 1907 A

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Jahrb. Nassau. Ver. Naturk., LX, 249-309.

Bell, R. 1897 A

Operations of the Geological Survey for the year 1895.

Summ. Rep. Geol. Surv. Canada for 1895 (1897); A, 1-154.

—— 1898 B

Mastodon and mammoth remains found near Hudson Bay.

Ottawa Naturalist, XI, 222-223.

An abstract of Bell, R., 1898 A.

Bell, Thomas 1841 A

Observations on the genus *Galictis* (Bell), with the description of a new species.

Trans. Zool. Soc. Lond. II, 201-206, pls. XXXV-XXXVII.

Bell, W. A. 1913 A

The Joggins Carboniferous section.

Can. Geol. Surv. Dept. Mines. Guide book No. 1, pt. ii, 326-346, with map.

Belling, D. E. 1912 A

Der Bau der vorderen paarigen Extremitäten und des Schultergürtels der *Trigla* im Zusammenhang mit dem Bau entsprechender Organe bei andern Teleostei.

Bull. Soc. Natural., Moscou (n.s.), XXV, 46-92, 3 text-figs.

Appended is a bibliography of 27 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 159.

Bemmelen, J. F. van. See **Van Bemmelen**, J. F.

Bender, Otto 1907 A

Die Homologie des Spritzloches der Selachier und der Paukenhöhlen der Amphibien, Sauropsiden und Säugetiere auf Grund ihrer Innervation.

Anat. Anz. Erganzungsh., XXX, 38-44.

—— 1910 A

Nochmals die Homologie der Paukenhöhlen.

Anat. Anz., XXXVII, 120-128.

—— 1911 A

Ueber Herkunft und Entwicke lung der columella auris bei *Testudo græca*.

Anat. Anz., XL., 161-177, 6 figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 22.

Bender, Otto—Continued 1912 A

Ueber die Entwicklung des Visceralskelettes bei *Testudo græca.* I: Die Entwicklung des Kiefer- und des Zungenbeinbogens (*Columella auris*) und der Paukenhöhle.

Abh. Bayer. Akad., xv. Abh. 10, 1-62, pls. i-vii, 15 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xviii, pt. 3, 28-32.

—— 1913 A

Eine Antwort an H. Fuchs, Strassburg i. E., auf seine Polemik im Anat. Anz. Bd. 43, Nr. 2, 1913, S. 59-64.

Anat. Anz., xliii, 284-286.

Beneden, P. J. See **Van Beneden,** P. J.

Bennett, Frederick Debell 1836 A

Notes on the anatomy of the spermaceti whale.

Proc. Zool. Soc. Lond., iv, 127-129.

Abstract in Isis von Oken, 1838, 217-218.

—— 1837 A

On the natural history of the spermaceti whale.

Proc. Zool. Soc. Lond., v, 39-42.

—— 1840 A

The cachalot, or sperm whale (*Catodon macrocephalus* Lacep., *Physeter macrocephalus* Shaw).

Bennett's Narrative of a Whaling Voyage round the Globe, ii, 153-241, figure.

Contains an account of the anatomy and habits of the sperm whale.

Bensley, B. Arthur 1900 A

Abstract in Anat. Hefte, Ergebn., xiv, 1085.

—— 1901 A

Are the Australian Marsupialia of opossum derivation.

Science (n.s.), xiii, 431-433.

Reviewed in Science (n.s.), xiv, 331.

—— 1901 B

On the question of an arboreal ancestry of the Marsupialia, and the inter-relationships of the mammalian subclasses. A review of certain phases of present and past opinion.

Amer. Naturalist, xxxv, 117-138, 2 text-figs.

The bibliography presents 31 titles.

—— 1901 C

A theory of the origin and evolution of the Australian Marsupialia.

Amer. Naturalist, xxxv, 245-269, pls. i-iii.

There is appended a bibliography of 19 titles.

Bensley, B. Arthur—Continued 1902 A

On the identification of meckelian and mylohoid grooves in the jaws of Mesozoic and Recent Mammalia.

Stud. Univ. Toronto, Biol. Ser., No. 3, 1-9, with plate.

—— 1903 A

On the evolution of the Australian Marsupialia; with remarks on the relationships of the marsupials in general.

Trans. Linn. Soc. Lond. (2), ix, 83-217, pls. v-vii, 6 text-figs.

—— 1906 A

The homologies of the stylar cusps in the upper molars of the Didelphyidæ.

Stud. Univ. Toronto, Biol. Ser., No. 5, 1-13, 6 text-figs.

—— 1913 A

A *Cervalces* antler from the Toronto interglacial.

Stud. Univ. Toronto, Geol. Ser., No. 8, 1-3, 1 fig.

—— 1923 A

A musk-ox skull from the Iroquois beach deposits of Toronto: *Ovibos proximus* sp. nov.

Univ. Toronto Stud. Biol. Ser., No. 23, 1-11, 2 pls.

Berg, L. S. 1904 A

Zur Systematik der Acipenseriden.

Zool. Anz., xxvii, 665-667.

—— 1906 A

Uebersicht der Cataphracti. (Fam. Cottidæ, Cottocomephoridæ und Comephoridæ) des Baikalsees.

Zool. Anz., xxx, 906-911.

—— 1907 A

Die Cataphracti des Baikal-Sees (Fam. Cottidæ, Cottocomephoridæ und Comephoridæ).

Wiss. Ergebn. Zool. Exped. Baikal, 1900-1902, Lief, iii, i, ii+1-75 pages, pls. i-v, 15 text-figs.

Bergglas, Bernhard 1925 A

Zur Frage der Hyperdaktylie und des Os intermetarsale.

Zeitschr. Anat. Entwicklungsges., Abt. I, lxxv, 127-148, 8 figs.

The bibliography occupies pages 147-148.

Bergmann, Carl 1841 A

Zur Vergleichung des Unterschenkels mit dem Vorderarm.

Arch. Anat., Physiol. Leipzig, 1841, 201-205.

Berkey, Charles P. 1923 A
Proceratops andrewsi, a preceratopsian dinosaur from Mongolia.
Amer. Mus. Novit., No. 72, 1-9, 4 text-figs.

Bernstein, Heinricus A. 1853 A
De anatomia corvorum.
Dissertatio zootomica. Vratislaviæ. i-vi +1-61 pages, 2 pls.

Berrill, N. J. 1925 A
The development of the skull in the sole and the plaice.
Quart. Jour. Micr. Soc., LXIX, 217-244, 15 figs.
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Berry, Edward W. 1916 A
Systematic paleontology [of Maryland]. Vertebrata.
Maryland Geol. Surv. Upper Cretaceous. 347-361, pls. viii, ix.
The bibliography of the species is presented.

—— 1917 A
The fossil plants from Vero, Florida.
Jour. Geol., XXV, 661-666.

—— 1917 B
The fossil plants from Vero, Florida.
Rep. Florida Geol. Surv., IX, 19-33.

—— 1917 C
A sailfish from the Virginia Miocene.
Amer. Jour. Sci. (4), XLIII, 461-464, 2 figs.
Abstract in Geol. Zentralbl., XXV, 44.

—— 1920 A
The evolution of the flowering plants and warm-blooded animals.
Amer. Jour. Sci. (4), XLIX, 207-211.

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The geologic evidence of evolution.
Scient. Monthly, XV, 97-118, 5 figs.

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The environment of the early vertebrates.
Amer. Naturalist, LIX, 354-362.

——, and W. K. **Gregory** 1906 A
Prorosmarus alleni, a new genus and species of walrus from the Upper Miocene of Yorktown, Virginia.
Amer. Jour. Sci. (4), XXI, 444-450, 4 text-figs.
Note in Knowl. Scient. News (n.s.), III, 509; Sci. Progress, I, 453.

Bertelli, D. 1909 A
I condotti ed i forami della mandibola nei mammiferi.
Arch. ital. Anat. Embr., VIII, 155-229, pls. xi-xiv.
The bibliography embraces 80 titles.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 33-37.

Berthold, A. A. 1825 A
Ueber die Kopfknochen der Nagethiere.
Isis von Oken, 1825, 907-920, 983-1003, pl. viii.

Berthoud, E. L. 1872 A
Tusk of an elephant or mastodon found in Colorado.
Amer. Jour. Sci. (3), III, 302.
See Woodhull, A. A., 1872 B.

—— 1879 A
Prof. Marsh on the fossil polydactyle ancestors of the horse; and recent examples.
Kansas City Rev. Sci. Indust., III, 153-155.

—— 1881 A
The American horse.
Kansas City Rev. Sci., Indust., V, 414-415.
Also in Amer. Naturalist, XVII, 1883, 434-435.

Bertin, Léon 1921 A
La valeur des caractères spécifiques dans le genre *Gasterosteus* Linné.
Bull. Mus. hist. nat. Paris, 1921, 143-150.

—— 1921 B
Note préliminaire sur la notion d'espèce et la variabilité chez les épinoches.
C. R. Acad. Sci. Paris, CLXXII, 623-625.

Bertrand, C. Eg. 1903 A
Les coprolithes de Bernissart.
Mém. Mus. hist. nat. Belgique, I, 1-154, pls. i-xv.

—— 1904 A
Les coprolithes de Bernissart. Première partie: Les coprolithes qui out été attribués aux iguanodons.
Bull. Soc. belge Geol., XVIII, Proc. Verb., 121-122.

Bessels, Emil 1869 A
Ueber fossil Selachier-Eier.
Jahresh. Ver. Naturk. Wurttemb., XXV, 152-155, pl. iii.

Beyer, Hermann 1907 A
Studien über den sogenannten Schallleitungsapparat bei den Wirbeltieren und Betrachtungen über die Function des Schneckenfensters.
Arch. Ohrheilk., LXXI, 258-292, 7 figs.

Beyer, Hermann—Continued 1907 B
Studien über den sogenannten Schallleitungsapparat bei den Wirbeltieren und Betrachtungen über die Function des Schneckenfensters.
Arch. Ohrheilk., LXXII, 278-304, figs. 8-16.

—— 1908 A
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Arch. Ohrheilk., LXXVII, 77-105, figs. 20-24.

—— 1909 A
Studien über den sogenannten Schallleitungsapparat bei den Wirbel tieren unter Betrachtungen über die Function des Schneckenfensters.
Arch. Ohrheilk., LXXVIII, 14-34.

Beyer, Samuel Walker 1899 A
Geology of Story County (Iowa).
Iowa Geol. Surv., IX, 1898 (1899), 157-237, map.

Beyrich, E. 1848 B
Ueber *Xenacanthus decheni* und *Holacanthus gracilis,* zwei Fische aus der Formation des Rothliegenden in Nord-Deutschland.
Arch. Min. Geogn. Bergb., XXII, 646-654.
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Bibbins, Arthur B. 1905 A
The buried cypress forests of the upper Chesapeake.
Records of the Past, IV, 47-53, 3 figs.

—— 1907 A
Charles Willson Peale's painting "The exhuming of the first American mastodon."
Science (n.s.), XXV, 297.

—— 1908 A
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Bull. Geol. Soc. Amer., XVIII, 650-652, pl. lxxii.

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Bicknell, Edwin 1872 A
Sections of tooth of *Ceratodus.*
Proc. Bost. Soc. Nat. Hist., XIV, 189-190.

Biddulph, John 1885 A
On the geographical races of the Rocky Mountain bighorn.
Proc. Zool. Soc. Lond., 1885, 678-684.

Bigot, A. 1897 A
Les dinosauriens.
Rev. gén. Sci. Paris, VIII, 462-468, 12 text-figs.
A popular account of the dinosaurs, mostly derived from Marsh's Dinosaurs of North America.

Bild, A. 1902 A
Die Entwickelungsgeschichte des Zahnsystems bei *Sus domesticus* und das Verhältnis der Lippenfurchenanlage zur Zahnleiste.
Anat. Anz., XX, 401-410, 12 text-figs.
Published in 1901 as an inaugural dissertation at Breslau.

Billings, Elkanah 1856 A
On the Tertiary rocks of Canada, with some account of their fossils.
Canad. Natural., Geol., I, 321-346.
Discusses the "glacial drift."

—— 1856 B
On the mammoth and the mastodon.
Canad. Natural., Geol., I, 379-390, 2 pls.

—— 1863 B
On the remains of fossil elephants found in Canada.
Geologist, VI, 475-478.

—— 1869 A
Note on the bones of a mastodon found near Dunnville, Oct., 1868.
Geol. Mag., VI, 38-40.

—— 1870 A
On the bones of a whale lately discovered at Cornwall, Ontario.
Canad. Natural., Quart. Jour. Sci. (n.s.), V, 438-439.

Binney, Edward W. 1879 A
On a giant tooth of a fossil shark.
Mem. Manchester Soc., XVIII, 118.

Birula, A. A. 1910 A
Contributions à la classification et à la distribution géographique des mammifères.
Annuaire Mus. St. Pétersb., XV, 318-333.
The title and the text are in Russian.

—— 1913 A
Contributions à la classification et la distribution géographique des mammifères. III: Carnivores recueillis dans la Perse par Mr. N. A. Zaroudny en 1896, 1898, 1900-1902, et 1903-1904.
Annuaire Mus. St. Pétersb., XVII, 219-280, pls. viii-x.
Printed in Russian.

Bischoff, T. L. W. 1840 B

Description anatomique du *Lepidosiren paradoxa.*

Ann. Sci. nat. (2), XIV, 116-159, pls. vi-x.

This is a French translation of Bischoff, T. L. W., 1840 A. See also Froriep's Notizen, XVI, cols. 141-148.

Bishop, Sherman C. 1921 A

Remains of a fossil phocid from Plattsburgh, New York.

Jour. Mamm., II, 170.

Bittner, F. 1912 A

Über die Schläfenregion am Schädel der Vögel und dessen Beziehungen zu dem der Reptilien.

Arch. Naturges., LXXVIII, Abt. A, Heft 6, 1-23, pl. i.

Appended is a bibliography consisting of 48 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 33-35.

Bizot, —— 1912 A

Le rapport brachio-antibrachial chez les cheiroptères.

C. R. Acad. Sci. Paris, CLIV, 131-133.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 160.

Black, Davidson 1915 A

A study of the endocranial casts of *Ocapia, Giraffa,* and *Samotherium,* with special reference to the convolutional pattern in the family of Giraffidæ.

Jour. Comp. Neur., XXV, 329-357, 25 figs.

The bibliography records 29 titles.

—— 1920 A

On the endocranial anatomy of *Oreodon* (*Merycoidodon*).

Jour. Comp. Neur., XXXII, 271-314, pls. i-vi, 26 text-figs.

There is a bibliography of 30 titles.

—— 1925 A

Asia and the dispersal of Primates.

Bull. Geol. Soc. China, IV, No. 2, 133-183, 1 table.

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Review in Amer. Jour. Sci. (5), XII, 459.

Black, Norman 1900 A

Adaptive modification as seen in the teeth of Mammalia.

Brit. Jour. Dental Sci., XLIII, 4-23.

Abstract in Deutsche Monatsschr. Zahnheilk., XVIII, 229-231.

Blainville, H. M. D. 1817 A

Mémoire sur l'opercule des poissons.

Bull. Soc. Philom. Paris, 1817, 104-109.

See also Isis von Oken, II, 1818, 1412-1419.

Blainville, H. M. D.—Continued 1819 A

Sur un nouveau caractère ostéologique servant à distinguer les animaux quadrupèdes ongulés en deux sections.

Bull. Soc. Philom. Paris, 1819, 41.

—— 1821 A

Mémoire sur l'emploi de la forme du sternum et de ses annexes, pour l'établissement ou la confirmation des familles naturelles parmi les oiseaux.

Jour. Phys. Chim. Hist. nat., XCII, 185-216.

—— 1835 A

Description de quelques espèces de reptiles de la Californie, précédée de l'analyse d'un systeme général d'erpétologie et d'amphibiologie.

Nouv. Ann. Mus. hist. nat. Paris, IV, 233-296, pls. xxiv-xxvii.

—— 1838 A

Recherches sur l'ancienneté des chéiroptères ou de la famille des chauvesouris à la surface de la terre, précédées de l'histoire de la science à leur sujet, des principes de leur classification et de leur distribution géographique actuelle.

Ann. Sci. nat., (2), IX, 357-366.

—— 1839 A

See Hay, O. P., 1902 A, p. 26.

Abstract in Neues Jahrb. Min. Geogn. Geol., 1840, 117-125.

—— 1839 D

New doubts relating to the supposed *Didelphis* of Stonesfield.

Mag. Nat. Hist., III, 1-10.

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Blake, Charles C. 1861 A

On the distribution of mastodon in South America.

Geologist, IV, 469-472.

Seems to contain earliest notice of *Elephas texianus.*

—— 1862 C

Shark's teeth at Panama.

Geologist, V, 316-317.

—— 1863 A

On the geological evidences of horses in the New World.

Geologist, VI, 24-28.

—— 1863 B

Elephas texianus v. *columbi.*

Geologist, VI, 56-60, 1 text-fig.

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Blake, J. F. 1905 A
A monograph of the fauna of the Cornbrash.
Palæont. Soc. Mon. for 1907, 1-106, pls. i-ix.
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The fossil tooth of a species of shark which was found near Martinez.
Proc. Calif. Acad. v, 172.

—— 1874 A
Exhibition of fossil teeth.
Proc. Calif. Acad. Sci. (1), v, 270.

Blake, William P. 1856 A
Observations on the physical geography and geology of the coast of California, from Bodega Bay to San Diego.
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—— 1857 A
Itinerary, or notes and general observations upon the geology of the route.
Report of explorations and surveys for a railroad route from the Mississippi River to the Pacific Ocean, vol. v, 1-310, with maps and figs.

—— 1866 A
New locality of fossils in gold-bearing rocks of California.
Proc. Calif. Acad. Sci., III, 289-291.

—— 1867 B
Fossil fish in the Great Basin, Nevada.
Proc. Calif. Acad. Sci., III, 306.

—— 1867 C
Tooth of mastodon.
Proc. Calif. Acád. Sci., III, 291.

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The Carson City ichnolites.
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—— 1899 A
The Pliocene skull of California and the flint implements of Table Mountain.
Jour. Geol., VII, 631-637.

—— 1908 A
Geological sketch of the region of Tucson, Arizona.
Carnegie Instn. Wash. Pub. No. 99, 45-68, pls. xlix-lii.

Blanchard, E. 1861 A
Le système tégumentaire des reptiles.
Ann. Sci. nat. (4), XV, 375-381.

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The African element in the fauna of India; a criticism of Mr. Wallace's views.
Ann. Mag. Nat. Hist. (4), XVIII, 277-294.

—— 1901 A
Direction of spirals in horns.
Nature, LXIII, 298.

Blasius, Wilhelm 1884 B
Ueber Vogel-Brustbeine.
Jour. Ornith., XXXII, 228-229.

—— 1885 A
Neue Thatsachen in Betreff des Aussterbens von *Alca impennis* L. (nach brieflichen Mittheilungen von A. Newton und W. Preyer).
Jour. Ornith., XXXIII, 398-399.

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Osteologische Studien (Messungs-Methoden an Vögel-Skeletten).
Jour. Ornith., XXXIII, [(4) xii], 409-415.

—— 1900 A
Der Riesen-Alk, *Alca impennis* L. oder *Plautus impennis* (L), in der ornitholigischen Litteratur der letzten fünfzehn Jahre.
Ornith. Monatsschr., Magdeburg, 434-446, pls. xxvii, xxviii.
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A nature wooing at Ormond by the Sea.
Pages 1-245, 12 plates, 1 map, 63 text-figs.

Blatschke, Friedrich 1904 A
Über die tiergeographische Bedeutung eines antarktischen Kontinents.
Verh. zool.-bot. Ges. Wien, LIV, 144-155.

Blendinger, W. 1904 A
Das Cribrum der Säugetiere.
Morphol. Jahrb., XXXII, 452-478, pls. xi, xii, 6 text-figs.

Bliss, Richard 1875 A
Some peculiarities in the structure of the fin spines of certain groups of fishes.
Proc. Bost. Soc. Nat. Hist., XVII, 386.
The groups considered are the siluroids and the doradoids.

Bloch, L. 1916 A
Schwimmblase und die vier vordersten Wirbel bei *Cobitis tænia* L.
Vierteljahrschr. Naturf. Ges. Zurich, LXI, 136-148, pls. v, vi.

Blumenbach, J. F. 1803 A
Das *Mammut-Ohioticum* nun wirklich in London.
Voigt's Mag. Naturk., v, pp. 1-7.

Bluntschli, H. 1911 A
Das Platyrrhinengebiss und die Bolksche Hypothese von der Stammesgeschichte des Primatengebisses.
Anat. Anz. Ergänzungsh., XXXVIII, 120-136, 8 text-figs.

—— 1912 A
Beziehungen zwischen Form und Funktion der Primatenwirbelsäule.
Morphol. Jahrb., XLIV, 489-515, pl. xi, 9 text-figs.

—— 1912 B
Zur Phylogenie des Gebisses der Primaten mit Ausblicken auf jene Säugetiere überhaupt.
Vierteljahrsschr. naturf. Ges. Zurich, LVI, 350-392, 21 text-figs.
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Die fossilen Affen Patagoniens und der Ursprung der platyrrhinen affen.
Anat. Anz., Ergänzungsh., XLIV, 33-43.

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Ueber probleme der Gebissentwicklung.
Anat. Anz., Ergänzungsh., XLIV, 195.

Boas, J. E. V. 1884 B
Ein Beitrag zur Morphologie der Nägel, Krallen, Hufe und Klauen der Säugethiere.
Morphol. Jahrb., IX, 389-400, pl. xviii.

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Ein Fall von vollständiger Ausbildung des 2. und 5. Metacarpale beim Rind.
Morphol. Jahrb., XVI, 530-533, 2 figs.

—— 1908 A
Bemaerkninger ved Forelaeggelsen af første Del af Boas & Paulli "*The Elephant's Head.*"
Vid. Medd. nat. For. Kjobenh., 1908, 197-211, pls. i, ii.

Boas, J. E. V.—Continued 1909 A
Der Fuss der Carnivoren.
Zool. Anz., XXXIV, 524-538, 15 text-figs.
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—— 1910 A
Die Fusssohlen der Hasen.
Zool. Anz., XXXV, 439-445, 5 text-figs.

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Der Gehörgang und der Ohrknorpel von *Balænoptera rostrata.*
Zool. Anz., XLIV, 380-381.

—— 1914 B
Phylogenie der Wirbeltiere.
Hertwig and Wettstein's Abstammungslehre: Systematik, Palaeontologie, Biogeographie.
Pages 530-605, figs. 1-47.
The bibliography records 50 titles.

—— 1914 C
Die Schlafenüberdachung und das Palatoquadratum in ihrem Verhältnis zum übrigen Schädel bei den Dipnoern und den terrestren Wirbeltieren.
Morphol. Jahrb., XLIX, 229-307, 100 text-figs.

—— 1917 A
Das Gehörn von *Antilocapra* und sein Verhältnis zu den anderen Cavicornia und der Hirsche.
Danske Vidensk. Selsk. Biol. Medd., I, 2, 1-23, pls. i, ii, 4 text-figs.

—— 1918 A
Zur Kenntnis des Hinterfusses der Marsupialier.
Danske Vidensk, Selsk. Biol. Medd., I, 8, 1-24, pls. i, ii.

Böcking, Adolph 1865 A
Ueber *Hydrochœrus capybara.*
Arch. Naturges., XXX, I, 32-40.
Abstract in Zeitschr. gesammt. Naturw., XXV, 1865, p. 302.

Böker, Hans 1913 A
Der Schädel von *Salmo salar*: Ein Beitrag zur Entwickelung des Teleostierschädels.
Anat. Hefte, XLIX, Abth. I, 359-397, pls. xxiv-xxvii, 10 text-figs.
The bibliography presents 16 titles.
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Böker, Hans—Continued 1927 A
Die Entstehung der Wirbeltiertypen und der Ursprung der Extremitäten.
Zeitschr. Morphol. Anthrop., xxvi, 1-58, 3 tables.
The bibliography presents 71 titles.

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Die Gattung *Ceratodus.*
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——— 1866 A

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——— 1866 B

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Science (n.s.), XXVIII, 94.

——— 1908 C

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Ein Beitrag zu der Stammesgeschichte der Sauropsiden.
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Anat. Anz., Ergänzungsh., XXX, 249-251.

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Observations on mammoths' bones and teeth found in Siberia.

Phil. Trans. Roy. Soc. Lond., XL, 125-138, pls. i-iii.

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The air-bladder and Weberian ossicles of the siluroid fishes.

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Geol. Surv. Ohio, First Ann. Rep., 71-98.

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Note on some abnormalities of the limbs and tail of dipnoan fishes.

Proc. Cambridge Philos. Soc., X, 325-327, pl. xiv.

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Fossil remains of the mastodon in Missouri.
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Geol. Surv. Missouri, Rep. 1873-1874, 154-178.

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Die sogenannten Hornfäden und die Flossenstrahlen der Fische.
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Anat. Anz., XXXII, 25-40, 8 figs.
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—— 1908 B
E. C. Case: Notes on the skull of *Lysorophus tricarinatus* Cope (Case, E. C., 1908 A).
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Broili, Ferdinand—Continued 1908 C

Ein montiertes Skelett von *Labidosaurus hamatus* Cope, einem Cotylosaurier aus dem Perm von Texas.

Zeitschr. deutsch. Geol. Ges., LX, 63-67, pl. iii.

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—— 1908 D

Über die rhachitomen Wirbel der Stegocephalen.

Zeitschr. deutsch. Geol. Ges., LX, Monatsb., 235-240, 1 text-fig.

Abstracts in Geol. Centralbl., XIII, 298; Neues Jahrb. Min. Geol. Pal., 1909, II, Ref., 138.

—— 1908 E

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Anat. Anz., XXXIII, 290-298, 3 text-figs.

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—— 1908 F

Über *Sclerocephalus* aus der Gaskohle von Nürschan und das Alter dieser Ablagerungen.

Jahrb. geol. Reichsanst. Wien, LVIII, 49-70, pl. i.

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Neue Ichthyosaurierreste aus der Kreide Norddeutschlands und das Hypophysenloch bei Ichthyosauriern.

Palaeontogr., LV, 295-302, pl. xxvii, 8 text-figs.

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—— 1912 A

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Broili, Ferdinand—Continued 1913 A

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—— 1913 D

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—— 1914 A

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—— 1915 A

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Beobachtungen über *Tanystropheus conspicuus* H. v. Meyer.

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Broili, Ferdinand—Continued 1915 C

Review of O. Jaekel: Ueber die Wirbeltierfunde in der oberen Trias von Halberstadt.

Neues Jahrb. Min. Geol. Pal., 1915, II, Ref., 285.

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Einige Bemerkungen über die Mixosauridæ.

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—— 1917 A

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—— 1919 A

Ctenochasma gracile Oppel.

Geognost. Jahresh., 1916-1917, XXIX, XXX, 299-306, pl. vii.

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Ein neuer Placodontier aus dem Rhaet der bayerischen Alpen.

Sitz-Ber. Akad. Wiss. Berlin, 1920, 311-320, 2 figs.

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Ein Fund von cf. *Placerias* Lucas in der kontinentalen Trias von Europa.

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Abstracts in Geol. Zentralbl., XXVI, 536; XVIII, 268; XXVIII, 283.

—— 1922 A

Ueber den feinen Bau der verknöcherten Sehnen (= verknöcherten Muskeln) von *Trachodon*.

Anat. Anz., LV, 465-475, 5 figs.

—— 1924 A

Ein Cotylosaurier aus der oberkarbonischen Gaskohle von Nürschan in Böhmen.

Sitz.-Ber. Akad. Wiss. München, 1924, 3-30, 5 figs.

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—— 1925 A

Ein *Pterodactylus* mit Resten der Flughaut.

Sitz.-Ber. Akad. Wiss. München, 1925, 23-24, 3 pls.

—— 1926 A

Über *Sclerocephalus häuseri* Goldfuss.

Sitz.-Ber. Akad. Wiss. München, 1926, 199-222, pls. i, ii, 9 text-figs.

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Broili, Ferdinand—Continued 1926 B

Die intercentra bei *Pleurosaurus*.

Anat. Anz., LXI, 171-174, 5 figs.

—— 1926 C

Ein neuer Fund von *Pleurosaurus* aus dem Malm Frankens.

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—— 1927 A

Über den Zahnbau von *Seymouria*.

Anat. Anz., LXIII, 185-188, 1 fig.

—— 1927 B

Ein Exemplar von *Rhamphorhynchus* mit Resten von Schwimmhaut.

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Ein *Rhamphorhynchus* mit Spuren von Haarbedeckung.

Sitz.-Ber. Akad. Wiss. München, 1927, 49-65, pls. iv-vii.

——, and E. **Fischer** 1917 A

Trachelosaurus fischeri nov. gen., nov. sp. Ein neuer Saurier aus dem Buntsandstein von Bernburg.

Jahrb. geol. Landesanst. Berlin, XXXVII, 1916 (1917), 359-414, pls. xxxi, xxxii, 15 figs.

Numerous references to the literature in foot-notes. Abstract in Neues Jahrb. Min. Geol. Pal., 1918, Ref., 223-226.

Broman, Ivar 1920 A

Untersuchungen über die Embryonal-Entwicklung der Pinnipedia. V: Über die Entwicklung und den Bau des Extremitätenskeletts der Robben nebst Bemerkungen über die Entstehung von Hypo- und Hyperphalangie bei den Säugetieren im Allgemeinen.

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Bronn, Heinrich G. 1848 A

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8vo., i-lxxxiv+1-775.

Pages xxii-lvii are occupied by a bibliography of the subject. Under the generic names in the Nomenclator are arranged the names of the species referred up to that time to each.

Bronn, Heinrich G.—Continued 1848 B

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—— 1848 C

On Norwood and Owen's description of *Macropetalichthys rhapheidolabis*.

Neues Jahrb. Min. Geol. Pal., 1848, Ref., 872.

—— 1849 A

Index palaeontologicus oder Uebersicht der bis jezt bekannten fossilen Organismen. B: Enumerator palaeontologicus: Systematische Zusammenstellung und geologische Entwickellungs-Gesetze der organischen Reiche.

8vo., 1-1106 pages.

—— 1849 B

Embryo of *Ichthyosaurus communis*.

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Review of Pearce, H. C., 1846 A.

—— 1862 A

On *Dinocyon thenardi* Jourdan.

Neues Jahrb. Min. Geol. Pal., 1862, Ref., 120.

Note regarding Jourdain's new species described in C. R. Acad. Sci. Paris, LIII, 962-963.

—— 1862 B

On A. Kölliker's "Ueber das Ende der Wirbelsäule der Ganoiden und einiger Teleostier." Abstract.

Neues Jahrb. Min. Geol. Pal., 1862, Ref., 380-381.

—— 1862 C

Bemerkungen über das zu dem älteren *Halitherium*-Schädelgehörige Skelett.

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Broom, Robert 1890 A

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—— 1896 A

On the homology of the palatine process of the mammalian premaxillary.

Proc. Linn. Soc. N. S. Wales (2), X, 477-485.

Broom, Robert—Continued 1896 B

On a small fossil marsupial with large grooved premolars.

Proc. Linn. Soc. N. S. Wales (2), X, 563-567, pls. XXV, XLV.

—— 1897 B

A contribution to the comparative anatomy of the mammalian organ of Jacobson.

Trans. Roy. Soc. Edinb., XXXIX, 231-255, pls. I, II.

Issued separately Nov. 18, 1897.

—— 1897 C

On the occurrence of an apparently distinct prevomer in *Gomphognathus*.

Jour. Anat. Physiol. Lond., XXXI, 277-279.

—— 1897 D

On the existence of a sterno-coracoidal articulation in a fœtal marsupial.

Jour. Anat. Physiol. Lond., XXXI, [(2), XI], 513-515, 1 text-fig.

—— 1898 A

Is there a critical period in marsupial development?

Jour. Anat. Physiol. Lond., XXXII [(2), XII], 714-720, 2 text-figs.

—— 1899 A

On the development and morphology of the marsupial shoulder-girdle.

Trans. Roy. Soc. Edinb., XXXIX, 749-770, pls. I, II.

—— 1901 A

On the structure and affinities of *Udenodon*.

Proc. Zool. Soc. Lond., 1901, II, 162-190, pls. XVI-XVIII, 2 text-figs.

—— 1901 B

On the ossification of the vertebræ in the wombat and other marsupials.

Proc. Linn. Soc. N. S. Wales, XXV, 735-739, pl. XLIX.

—— 1902 A

Remarks on certain differences in the skulls of dicynodonts, apparently due to sex.

Proc. Zool. Soc. Lond., 1902, II, 86-88, 1 text-fig.

—— 1902 B

On the mammalian and reptilian vomerine bones.

Nature, LXVII, 168.

Abstract in Rev. crit. Paléozool., VIII, 9-10.

Broom, Robert—Continued 1902 C

On the early condition of the shoulder-girdle in the polyprotodont marsupials *Dasyurus* and *Perameles*.

Jour. Linn. Soc. Zool., xxviii, 449-454, pl. xli.

—— 1902 D

On the mammalian and reptilian vomerine bones.

Proc. Linn. Soc. N. S. Wales, xxvii, 545-560, pls. xxiv-xxvi.

There is a bibliography of 15 titles.

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—— 1903 A

On the structure of the palate in the primitive theriodonts.

Geol. Mag. (4), x, 343-345, 1 text-fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1903, ii, Ref., 441; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 160; Geol. Mag. (4), x, 343.

—— 1903 B

On a new stegocephalian (*Batrachosuchus browni*) from the Karoo beds of Ariwal North, South Africa.

Geol. Mag. (4), x, 499-501, 2 text-figs.

—— 1903 C

On the axis, atlas and proatlas in the higher theriodonts.

Proc. Zool. Soc. Lond., 1903, i, 177-180, pl. xviii.

—— 1903 D

On the classification of the theriodonts and their allies.

Rep. S. African Assoc. Adv. Sci., 286-294.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 478; Rev. crit. Paléozool., viii, 213-216; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 159-161.

—— 1903 E

On an almost perfect skeleton of *Pareiasaurus serridens* Owen.

Ann. S. African Mus., iv, 123-138, pls. xv, xvi.

Abstract in Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 141-142; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 159-161.

—— 1903 F

On the structure of the shoulder-girdle in *Lystrosaurus*.

Ann. S. African Mus., iv, 139-141, 2 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 142; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 159-161.

Broom, Robert—Continued 1903 G

On the presence of a pair of distinct prevomers in *Titanosuchus*.

Ann. S. African Mus., iv, 144-146.

Abstract in Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 318.

—— 1903 H

On some new primitive theriodonts in the South African Museum.

Ann. S. African Mus., iv, 147-158, pls. xvii, xviii.

For abstracts see Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 142-143; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 160.

—— 1903 I

On the mammalian and reptilian vomerine bones.

Proc. Linn. Soc. N. S. Wales, xxvii, 545-560, pls. xxiv-xxvi.

The bibliography presents 15 titles.

—— 1903 J

On the development of the pterygo-quadrate arch in the Lacertilia.

Jour. Anat. Physiol. Lond., xxxvii (n.s., xvii), 107-111, 6 text-figs.

—— 1903 K

On the skull of a true lizard (*Paliguana whitei*) from the Triassic beds of South Africa.

Rec. Albany Mus., i, 1-3, pl. i, figs. 1, 2.

—— 1903 L

On the lower jaw of a small mammal from the Karoo beds of Ariwal North, South Africa.

Geol. Mag. (4), x, 345, fig.

—— 1904 A

On the structure of the theoriodont mandible, and on its mode of articulation with the skull.

Proc. Zool. Soc. Lond., 1904, i, 490-498, pl. xxxv, 1 text-fig.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), Abth. 3, 49-51; Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 140.

—— 1904 B

The origin of the mammalian carpus and tarsus.

Trans. S. African Philos. Soc., xv, 89-96, pl. vii.

Abstract in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 169.

—— 1904 C

Observations on the structure of *Mesosaurus*.

Trans. S. African Philos. Soc., xv, 103-112, pl. ix.

Broom, Robert—Continued 1904 D

On some points in the anatomy of the anomodont skull.

Rec. Albany Mus., I, 75-82, pl. iv.

Abstract in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 165; Rev. crit. Paléozool., VIII, 218-219.

—— 1905 A

On some points in the anatomy of the theriodont reptile *Diademodon*.

Proc. Zool. Soc. Lond., 1905, I, 96-102, pl. X.

—— 1905 B

On the affinities of the primitive reptile *Procolophon*.

Proc. Zool. Soc. Lond., 1905, I, 212-217.

—— 1905 C

On the use of the term Anomodontia.

Rec. Albany Mus., I, 266-269.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 141; Rev. crit. Paléozool., XI, 153-154.

—— 1905 D

On the structure and affinities of the endothiodont reptiles.

Trans. S. African Philos. Soc., XV, 259-282, pls. xii-xiv.

Abstract in Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 317-318.

—— 1905 E

On the affinities of *Tritylodon*.

Trans. S. African Philos. Soc., XVI, 73-77.

Abstract in Rev. crit. Paléozool., XI, 158.

—— 1905 F

Origin of mammals.

Nature, LXXIII, 40.

—— 1906 A

On the arrangement of the epiphyses of the mammalian metacarpals and metatarsals.

Anat. Anz., XXVIII, 106-108, 2 text-figs.

Abstracts in Sci. Progress, II, 521; Rev. crit. Paléozool., XI, 213; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 165.

—— 1906 B

On the South African diaptosaurian reptile *Howesia*.

Proc. Zool. Soc. Lond., 1906, II, 591-600, pls. xl, xli.

—— 1906 C

The origin of mammals.

Rep. Brit. Assoc. Adv. Sci., LXXV, South Africa, 1905, 437-438.

Brief notices in Geol. Centralbl., IX, 416; X, 40. Abstracts in Nature, LXXIII, 1906, 40; Sci. Progress, II, 520; Rev. crit. Paléozool., XII, 225; Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 172.

Broom, Robert—Continued 1906 L

On the early development of the appendicular skeleton of the ostrich, with remarks on the origin of birds.

Trans. S. African Philos. Soc., XVI, 355-368, pl. ix.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1908, I, Ref., 441-442; Rev. crit. Paléozool., XII, 238.

—— 1906 E

On some little-known bones of the mammalian skull.

Trans. S. African Philos. Soc., XVI, 369-372.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 172.

—— 1906 F

Note on the lacertilian shoulder girdle.

Trans. S. African Philos. Soc., XVI, 373-375.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 171.

—— 1906 G

On the South African dinosaur (*Hortalotarsus*).

Trans. S. African Philos. Soc., XVI, 201-206, pl. iii.

—— 1907 A

On some new fossil reptiles from the Karroo beds of Victoria West, South Africa.

Trans. S. African Philos. Soc., XVIII, pt. i, 31-41, pls. iii, iv.

—— 1907 B

A contribution to the knowledge of the Cape golden moles.

Trans. S. African Philos. Soc., XVIII, pt. 3, 283-311.

—— 1907 C

Some recent advances in South African paleontology.

Science (n.s.), XXVI, 796-797.

—— 1908 A

On the origin of the mammal-like reptiles.

Proc. Zool. Soc. Lond., 1907, II, 1047-1061, text-figs. 244-247.

Abstracts in Geol. Centralbl., XIII, 396-397; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 42; Sci. Progress, III, 468.

—— 1908 B

On the pareiasaurian genus *Propappus*.

Ann. S. African Mus., IV, 351-360, pl. xlv.

Abstract in Neues Jahrb. Min. Geol. Pal., 1909, II, Ref., 126.

Broom, Robert—Continued 1908 C

On the inter-relationships of the known therocephalian genera.

Ann. S. African Mus., IV, 369-372.

Abstract in Neues Jahrb. Min. Geol. Pal., 1909, II, Ref., 127-128.

—— 1908 D

On a new labyrinthodont, *Rhinesuchus whaitsi*, from the Permian beds of South Africa.

Ann. S. African Mus., IV, 373-376, pl. xlvi.

Abstract in Neues Jahrb. Min. Geol. Pal., 1909, II, Ref., 137.

—— 1908 E

On the homology of the mammalian alisphenoid bone.

Rep. S. African Assoc. Adv. Sci., 5th meet. Natal, 1907, 114-115.

—— 1908 F

Further observations on the Chrysochloridæ.

Ann. Transvaal Mus., I, 14-16.

—— 1909 A

The fossil fishes of the Upper Karroo beds of South Africa.

Ann. S. African Mus., VII, 251-269, pls. xii-xiii.

Abstract in Sci. Progress, IV, 673.

—— 1909 B

On the nomenclature of the elements of the amphibian shoulder-girdle.

Rep. S. African Assoc. Adv. Sci., 1908, 162-166.

—— 1909 C

Some observations on the dentition of *Chrysochloris*, and on the tritubercular theory.

Ann. Natal Gov't Mus., II, pt. 1, 129-139, pl. ii.

—— 1909 D

Observations on the development of the marsupial skull.

Proc. Linn. Soc. N. S. Wales, XXXIV, 195-214, pls. x-xvii.

—— 1909 E

On the skull of *Tapinocephalus*.

Geol. Mag. (5), VI, 400-402, 2 figs.

—— 1910 A

A comparison of the Permian reptiles of North America with those of South Africa.

Bull. Amer. Mus. Nat. Hist., XXVIII, 197-234, 20 text-figs.

Abstracts in Geol. Centralbl., XIX, 444-445; Sci. Progress, V, 686; Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 32; XVIII, pt. 3, 208; Nature, LXXXIV, 402.

Broom, Robert—Continued 1910 B

On *Tritylodon*, and on the relationships of the Multituberculata.

Proc. Zool. Soc. Lond., 1910, 760-768, text-figs. 67, 68.

Abstracts in Geol. Centralbl., XVIII, 522; Nature, LXXXV, 48; Sci. Progress, V, 674; Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 32.

—— 1910 C

On the relationships of the South African fossil reptiles to those of other parts of the world.

Trans. Roy. Soc. S. Africa, I, 473-477.

Abstract in Sci. Progress, V, 686; Nature, LXXXIV, 158.

—— 1911 A

On the structure of the skull in cynodont reptiles.

Proc. Zool. Soc. Lond., 1911, 893-925, pl. xlvi, text-figs. 168-180.

Abstracts in Geol. Centralbl., XVII, 617; XX, 463-464; Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 24; Nature, LXXXVI, 505; Sci. Progress, VI, 578.

—— 1911 B

Note on the temnospondylous stegocephalian, *Rhinesuchus*.

Trans. Geol. Soc. S. Africa, XIV, 79-81, pl. xiii.

Abstract in Geol. Centralbl., XVII, 617.

—— 1911 C

On the affinities of *Cœnolestes*.

Proc. Linn. Soc. N. S. Wales, XXXVI, 315-320.

—— 1912 A

The morphology of the coracoid.

Anat. Anz., XLI, 625-631, 16 text-figs.

Abstracts in Geol. Centralbl., XVIII, 378; Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 426; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 163.

—— 1912 B

On the structure of the internal ear and the relations of the basicranial nerves in *Dicynodon*, and on the homology of the mammalian auditory ossicles.

Proc. Zool. Soc. Lond., 1912, 419-425, pl. lvi, text-fig. 53.

Abstract in Neues Jahrb. Min. Geol. Pal., 1913, I, Ref., 521; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 40.

—— 1912 C

On a new species of *Propappus*, and on the pose of the pareiasaurian limbs.

Ann. S. African Mus., VII, 323-331, pls. xix-xxi.

Broom, Robert—Continued 1912 D

On some points in the structure of the dicynodont skull.

Ann. S. African Mus., VII, 337-351, 5 text-figs.

Abstract in Geol. Centralbl., XVIII, 378.

—— 1913 A

On the origin of the cheiropterygium.

Bull. Amer. Mus. Nat. Hist., XXXII, 459-464, 6 text-figs.

Abstracts in Geol. Centralbl., XX, 527; Sci. Progress, XVIII, 652; Rev. crit. Paléozool., XXI, 51; Geol. Mag. (5), X, 571.

—— 1913 B

On evidence of a mammal-like dental succession in the cynodont reptiles.

Bull. Amer. Mus. Nat. Hist., XXXII, 465-468, 1 text-fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 151; Rep. 83d Meet. Brit. Assoc. Adv. Sci., Birmingham, 1913 (1914), 530; Sci. Progress, VIII, 646; Geol. Mag. (5), X, 570.

—— 1913 C

On the squamosal and related bones in the mosasaurs and lizards.

Bull. Amer. Mus. Nat. Hist., XXXII, 507-508, 2 text-figs.

Briefly noticed in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 152; Sci. Progress, VIII, 643; Geol. Zentralbl., XXI, 266; Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 44.

—— 1913 D

On the structure and affinities of *Bolosaurus*.

Bull. Amer. Mus. Nat. Hist., XXXII, 509-516, 5 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 151-152; Geol. Centralbl., XX, 527; Sci. Progress, VIII, 649; Rev. crit. Paléozool., XXI, 51; Geol. Zentralbl., XXI, 266.

—— 1913 E

On the cotylosaurian genus *Pantylus* Cope.

Bull. Amer. Mus. Nat. Hist., XXXII, 527-532, 4 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 161-162; Sci. Progress, VIII, 649; Rev. crit. Paléozool., XXI, 51.

—— 1913 F

Studies on the Permian temnospondylous stegocephalians of North America.

Bull. Amer. Mus. Nat. Hist., XXXII, 563-595, 21 text-figs.

Abstracts Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 164-165; Sci. Progress, VIII, 650; Rev. crit. Paléozool., XXI, 52; Geol. Zentralbl., XXI, 266.

Broom, Robert—Continued 1913 G

South African fossil reptiles.

Amer. Mus. Jour., XIII, 334-346, 13 plates.

Abstract in Nature, XCII, 640.

—— 1913 H

On the structure of the mandible in the Stegocephalia.

Anat. Anz., XLV, 73-78, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 44.

—— 1913 I

On the manus and pes of *Pareiasaurus*.

Ann. S. African Mus., VII, 353-357, 2 text-figs.

—— 1913 J

A revision of the reptiles of the Karroo.

Ann. S. African Mus., VII, 361-366.

—— 1913 K

On a nearly perfect skull of a new species of the Gorgonopsia.

Ann. S. African Mus., XII, 8-12.

Abstract in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 163.

—— 1913 L

On the origin of the mammalian digital formula.

Anat. Anz. XLIII, 230-232, 1 fig.

Abstract in Jahresber. Anat. Entwickl (N.F.), XIX, pt. 3, 31, 145.

—— 1913 M

Note on the dicynodont vomer.

Nature, XCII, 6-7.

Abstract in Sci. Progress, VIII, 643.

—— 1913 N

The origin of mammals.

Proc. Roy. Soc. Lond. (B), LXXXVII, 87-88 (Abstract of lecture).

—— 1913 O

On the South-African pseudosuchian *Euparkeria* and allied genera.

Proc. Zool. Soc. Lond., 1913, 613-633, pls. lxxv-lxxix.

There is a bibliography of 6 titles.

—— 1913 P

On the Gorgonopsia, a suborder of the mammal-like reptiles.

Proc. Zool. Soc. Lond., 1913, 225-230, pls. xxxvi, xxxvii.

—— 1914 A

Some points in the structure of the diadectid skull.

Bull. Amer. Mus. Nat. Hist., XXXIII, 109-114, 4 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 473; Geol. Zentralbl., XXI, 265; XXVIII, 445.

Broom, Robert—Continued 1914 B

On the structure and affinities of the Multituberculata.

Bull. Amer. Mus. Nat. Hist., xxxiii, 115-134, pls. xi, xii, 9 text-figs.

Abstracts in Bull. Geol. Soc. Amer., xxv, 140-141; Rev. crit. Paléozool., xviii, 99; Geol. Zentralbl., xxi, 301; xxvii, 222; Nature, xciii, 619, fig.

—— 1914 C

A further comparison of the South African dinocephalians with the American pelycosaurs.

Bull. Amer. Mus. Nat. Hist., xxxiii, 135-141, 7 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, ii, Ref., 472-473; Geol. Zentralbl., xxviii, 446.

—— 1914 D

Structure and affinities of the Multituberculata.

Bull. Geol. Soc. Amer., xxv, 140-141. Abstract.

—— 1914 E

Relations of the American pelycosaurs to the South African dinocephalians.

Bull. Geol. Soc. Amer., xxv, 143. Abstract.

—— 1914 F

Conference on convergent evolution.

Ann. N. Y. Acad. Sci., xxii, 295-299.

—— 1914 G

The origin of mammals.

Ann. N. Y. Acad. Sci., xxiii, 302-306.

—— 1914 H

A new thecodont reptile.

Proc. Zool. Soc. Lond., 1914, 1072-1077, 2 text-figs.

—— 1915 A

On the organ of Jacobson and its relations in the "Insectivora." Part II: *Talpa, Centetes,* and *Chrysochloris.*

Proc. Zool. Soc. Lond., 1915, 157-162, 347-354, pls. i, ii, iii, iv.

—— 1915 B

On the Triassic stegocephalians *Brachyops, Bothriceps,* and *Lydekkerina,* gen. nov.

Proc. Zool. Soc. Lond., 1915, 363-368, 3 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1925, i, 137.

—— 1915 C

On the origin of mammals.

Phil. Trans. Roy. Soc. Lond. (B), ccvi, 1-48, pls. i-vii.

The bibliography comprises 99 titles.

Broom, Robert—Continued 1916 A

On the structure of the skull in *Chrysochloris.*

Proc. Zool. Soc. Lond., 1916, 449-459, pls. i, ii, 3 text-figs.

Abstract in Nature, xcvii, 315.

—— 1916 B

Pareiasaurian nomenclature.

Ann. Mag. Nat. Hist. (8), xvii, 347-348.

—— 1916 C

Discussion on the "Biologia Centrali-Americana."

Proc. Zool. Soc. Lond., 1916, 549-550.

—— 1917 A

Comments on nomenclature of cranial elements.

Bull. Geol. Soc. Amer. xxviii, 975-978.

—— 1918 A

Observations on the genus *Lysorophus* Cope.

Ann. Mag. Nat. Hist. (9), ii, 232-239, 3 text-figs.

—— 1921 A

On the structure of the reptilian tarsus.

Proc. Zool. Soc. Lond., 1921, pt. 1, 143-155, figs. 1-27.

Abstract in Sci. Progress, xvi, 215.

—— 1921 B

On some genera and species of anomodont reptiles from the Karroo beds of South Africa.

Proc. Zool. Soc. Lond., 1921, 647-674, 45 figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1925, i, Ref., 145-147.

—— 1922 A

On the temporal arches of the Reptilia.

Proc. Zool. Soc. Lond., 1922, 17-26.

—— 1922 B

On the persistence of the mesopterygoid in certain reptilian skulls.

Proc. Zool. Soc. Lond., 1922, 455-460, 7 figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1925, i, Ref., 147.

—— 1923 A

On the structure of the skull in the carnivorous dinocephalian reptiles.

Proc. Zool. Soc. Lond., 1923, 661-684, 17 figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1925, i, Ref., 147-149.

Broom, Robert—Continued 1924 A

On some points in the structure of the pareiasaurian skull.

Proc. Zool. Soc. Lond., 1924, 499-508, figs. 1-6.

There are 9 titles in the bibliography.

Abstract in Neues Jahrb. Min. Geol. Pal., 1925, I, Ref., 441.

—— 1924 B

On the classification of the reptiles.

Bull. Amer. Mus. Nat. Hist., LI, 39-65, 13 figs.

—— 1924 C

Further evidence on the structure of the *Eosuchia*.

Bull. Amer. Mus. Nat. Hist., LI, 67-76, 4 figs.

—— 1925 A

On the origin of lizards.

Proc. Zool. Soc. Lond., 1925, pt. 1, 1-16, 8 figs.

—— 1926 A

On the mammalian presphenoid and mesethmoid bones.

Proc. Zool. Soc. Lond., 1926, 257-264, 5 figs.

—— 1927 A

Fossil hunting in the South African Karroo.

Nat. Hist., XXVII, 73-76, 3 figs.

——, and S. H. **Haughton** 1913 A

On the skeleton of a new pareiasaurian (*Pareiasuchus peringueyi* g. et sp. nov.).

Ann. S. Afric. Mus., XII, 17-25, pls. iv-v.

—— 1913 B

On a new species of *Scymnognathus* (*S. tigriceps*).

Ann. S. Afric. Mus., XII, 26-35, pl. vi.

—— 1913 C

On two new species of *Dicynodon*.

Ann. S. Afric. Mus., XII, 36-39, pl. vii.

Brower, Charles D. 1911 A

The musk-ox in Alaska.

Bull. Zool. Soc. N. Y., No. xlv, 754-755.

Brown, Arthur Erwin 1878 A

The Sirenia.

Amer. Naturalist, XII, 291-298.

—— 1901 A

On some points in the phylogeny of the Primates.

Proc. Acad. Nat. Sci. Phila., LIII, 119-125.

Abstract in Geol. Centralbl., III, 59.

Brown, Arthur Erwin—Cont'd. 1904 A

Post-glacial nearctic centres of dispersal for reptiles.

Proc. Acad. Nat. Sci. Phila., LVI, 464-474.

—— 1904 B

The zoology of North American big game.

Pages 52-98 in "American Big Game and Its Haunts," by George Bird Grinnell.

Brown, Barnum 1903 A

A new genus of ground sloth from the Pleistocene of Nebraska.

Bull. Amer. Mus. Nat. Hist., XIX, 569-583, pls. 1-li.

Describes *Paramylodon nebrascensis*.

Abstracts in Geol. Centralbl., VI, 54; Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 471; Rev. crit. Paléozool., IX, 69; X, 140.

—— 1904 A

Stomach stones and food of plesiosaurs.

Science (n.s.), XX, 184-185.

Abstracts in Geol. Centralbl., VII, 426; Rev. crit. Paléozool., X, 143-144.

—— 1905 A

Recent exploration of a Pleistocene fissure in northern Arkansas.

Science (n.s.), XXI, 300.

—— 1905 B

The osteology of *Champsosaurus* Cope.

Mem. Amer. Mus. Nat. Hist., IX, 1-26, pls. i-iv.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 132; Geol. Centralbl., XI, 474; Sci. Progress, I, 459.

—— 1906 A

New notes on the osteology of *Triceratops*.

Bull. Amer. Mus. Nat. Hist., XXII, 297-300, pl. xl, 2 text-figs.

Brief abstracts in Geol. Centralbl., XI, 475; Neues Jahrb. Min. Geol. Pal., 1908, I, Ref., 442.

—— 1907 A

The Hell Creek beds of the Upper Cretaceous of Montana.

Bull. Amer. Mus. Nat. Hist., XXIII, 823-845, 8 text-figs., two maps and lists of fossils found.

Abstracts in Geol. Centralbl., XIV, 326; Amer. Jour. Sci. (4), XXV, 86.

—— 1907 B

Gastroliths.

Science (n.s.), XXV, 392.

Brown, Barnum—Continued 1908 A

The Conrad fissure, a Pleistocene bone deposit in northern Arkansas; with description of two new genera and twenty new species of mammals.

Mem. Amer. Mus. Nat. Hist., New York, IX, 157-208, pls. xiv-xxv, 3 text-figs.

Abstracts in Amer. Naturalist, XLII, 629; Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 358-360; Geol. Centralbl., XII, 220; Amer. Jour. Sci. (4), XXVII, 93; Sci. Progress, III, 454, 457.

Review in Rev. crit. Paléozool., XVI, 221.

—— 1908 B

The Ankylosauridæ, a new family of armored dinosaurs from the Upper Cretaceous.

Bull. Amer. Mus. Nat. Hist., XXIV, 187-201, 20 text-figs.

Abstracts in Amer. Jour. Sci. (4), XXV, 528; Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 440-441; Geol. Centralbl., XIII, 204; Zeitschr. Indukt. Abstamm. Vererb.-Lehre, II, 1909, 28; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 160; Sci. Progress, III, 461.

—— 1908 C

The *Trachodon* group.

Amer. Mus. Jour., VIII, 51-56, 4 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 145; Geol. Centralbl., XII, 222.

—— 1909 A

Notes on the restorations of the Cretaceous birds *Hesperornis* and *Baptornis*.

Science (n.s.), XXXI, 440.

—— 1910 A

The Cretaceous Ojo Alamo beds of New Mexico with description of the new dinosaur genus *Kritosaurus*.

Bull. Amer. Mus. Nat. Hist., XXVIII, 267-274, pls. xxvii-xxix, 7 text-figs.

Abstracts in Geol. Centralbl., XVII, 323; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 210; Sci. Progress, V, 681.

Review in Rev. crit. Paléozool., XVI, 233.

—— 1911 A

Notes on the restorations of the Cretaceous birds *Hesperornis* and *Baptornis*.

Ann. N. Y. Acad. Sci., XX, 401.

—— 1911 B

Fossil hunting by boat in Canada.

Amer. Mus. Jour., XI, 273-282, 12 figs.

Brown, Barnum—Continued 1912 A

The osteology of the manus in the family Trachodontidæ.

Bull. Amer. Mus. Nat. Hist., XXXI, 105-108, 2 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, I, Ref., 525; Geol. Centralbl., XX, 145; Rev. crit. Paléozool., XVII, 74.

—— 1912 B

A crested dinosaur from the Edmonton Cretaceous.

Bull. Amer. Mus. Nat. Hist., XXXI, 131-136, pls. x, xi, 4 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, I, Ref., 525; Geol. Centralbl., XX, 146; Rev. crit. Paléozool., XVII, 76.

—— 1912 C

Brachyostracon, a new genus of glyptodonts from Mexico.

Bull. Amer. Mus. Nat. Hist., XXXI, 167-177, pls. xiii-xviii, 4 text-figs.

Abstracts in Sci. Progress, VIII, 10; Geol. Centralbl., XX, 145.

—— 1912 D

Fossil hunting by boat in Canada.

Scient. Amer. Suppl., LXXIII, 82.

—— 1913 A

The skeleton of *Saurolophus*, a crested duck-billed dinosaur from the Edmonton Cretaceous.

Bull. Amer. Mus. Nat. Hist., XXXII, 387-393, pls. lxii, lxiii, 1 text-fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 336; Sci. Progress, VIII, 639; Rev. crit. Paléozool., XVIII, 54; Geol. Zentralbl., XXI, 265; Nature, XCII, 514.

—— 1913 B

A new trachodont dinosaur, *Hypacrosaurus*, from the Edmonton Cretaceous of Alberta.

Bull. Amer. Mus. Nat. Hist., XXXII, 395-406, 8 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 336; Sci. Progress, VIII, 639; Rev. crit. Paléozool., XVIII, 53; Geol. Zentralbl., XXI, 265.

—— 1913 C

A new plesiosaur, *Leurospondylus*, from the Edmonton Cretaceous of Alberta.

Bull. Amer. Mus. Nat. Hist., XXXII, 605-615, 7 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 510-511; Rev. crit. Paléozool., XXI, 52; Geol. Zentralbl., XXI, 264; Nature, XCII, 563.

Brown, Barnum—Continued 1913 D

A new crested dinosaur.

Amer. Mus. Jour., XIII, 138-144, 7 plates. Abstract in Nature, XCI, 326.

——— 1913 E

The manus of trachodont dinosaurs.

Science (n.s.), XXXVIII, 926-927.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 508; Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 145.

——— 1914 A

Anchiceratops, a new genus of horned dinosaurs from the Edmonton Cretaceous of Alberta. With discussion of the origin of the ceratopsian crest and the brain casts of *Anchiceratops* and *Trachodon*.

Bull. Amer. Mus. Nat. Hist., XXXIII, 539-548, pls. xxix-xxxvii, 1 text-fig.

Abstracts in Rev. crit. Paléozool., XIX, 102; XXI, 53; Geol. Zentralbl., XXVIII, 446.

——— 1914 B

A complete skull of *Monoclonius*, from the Belly River Cretaceous of Alberta.

Bull. Amer. Mus. Nat. Hist., XXXIII, 549-558, pls. xxxviii-xl, 2 text-figs.

Abstract in Rev. crit. Paléozool., XIX, 102; XX, 140; Geol. Zentralbl., XXVIII, 445.

——— 1914 C

Corythosaurus casuarius, a new crested dinosaur from the Belly River Cretaceous, with provisional classification of the family Trachodontidæ.

Bull. Amer. Mus. Nat. Hist., XXXIII, 559-565; pl. xli.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1919, Ref., 356; Rev. crit. Paléozool., XIX, 102; XX, 138-139; Geol. Zentralbl., XXVIII, 445; Nature, XCIV, 492, fig.

——— 1914 D

Leptoceratops, a new genus of *Ceratopsia* from the Edmonton Cretaceous of Alberta.

Bull. Amer. Mus. Nat. Hist., XXXIII, 567-580, pl. xlii, 19 text-figs.

Abstracts in Rev. crit. Paleozool., XIX, 102; XX, 139; Neues Jahrb. Min. Geol. Pal., 1920, I, Ref., 247; Geol. Zentralbl., XXVIII, 376.

——— 1914 E

Cretaceous-Eocene correlation in New Mexico, Wyoming, Montana, Alberta.

Bull. Geol. Soc. Amer., XXV, 355-380, 2 text-figs.

Abstract in Rev. crit. Paléozool., XX, 37.

Brown, Barnum—Continued 1915 A

Tyrannosaurus, the largest flesh-eating animal that ever lived.

Amer. Mus. Jour., XV, 271-280, 5 plates, 2 figures.

——— 1915 B

Fossil hunting by boat in Canada.

Handbook series No. 5, Amer. Mus. Nat. Hist., New York, 152-159, figs. 47, 48.

——— 1915 C

Tyrannosaurus, a Cretaceous carnivorous dinosaur.

Scient. Amer., CXIII, 322-323, 6 figs.

Abstract in Nature, XCVI, 326.

——— 1916 A

A new crested trachodont dinosaur Prosaurolophus maximus.

Bull. Amer. Mus. Nat. Hist., XXXV, 701-708, 5 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 55; Neues Jahrb. Min. Geol. Pal., 1920, I, Ref., 246.

——— 1916 B

Corythosaurus casuarius: Skeleton, musculature and epidermis.

Bull. Amer. Mus. Nat. Hist., XXXV, 709-716, pls. xiii-xxii.

Abstracts in Rev. crit. Paléozool., XXI, 55; Nature, XCVIII, 356; Neues Jahrb. Min. Geol. Pal., 1919, Ref., 356.

——— 1917 A

A complete skeleton of the horned dinosaur *Monoclonius*, and description of a second skeleton showing skin impressions.

Bull. Amer. Mus. Nat. Hist., XXXVII, 281-306, pls. xi-xix, 4 text-figs.

Abstracts in Rev. crit. Paléozool., XXIV, 146-147; Geol. Zentralbl., XXVIII, 534; Sci. Progress, XII, 425.

——— 1917 B

Monoclonius, a Cretaceous horned dinosaur.

Amer. Mus. Jour., XVII, 135-140, 4 illust.

——— 1919 A

Hunting big game of other days. A boating expedition in search of fossils in Alberta, Canada.

Nat. Geogr. Mag., XXXV, 407-429, 25 illustrations.

——— 1920 A

Note on scapula of an armored dinosaur.

U. S. Geol. Surv. Profess. Pap., CXIX, 65.

———. See also **Brown** and **Matthew**; **Brown** and **Osborn**.

Brown, J. S. 1904 A
Mammoth tooth [found at Austin, Texas.]
Scient. Amer., xc, 119.

Brown, Robert 1868 A
Notes on the history and geographical relations of the Cetacea frequenting Davis Strait and Baffin's Bay.
Proc. Zool. Soc. Lond., 1868, 533-556.

Bru, Jean-Baptiste 1804 A
Description des os du *Megatherium*, faite en montant le squelette.
Ann. Mus. hist. nat. Paris, v, 387-400, pls. xxiv, xxv.
An abridged translation made by Bonp'and. A description of the South American species.

Brubacher, H. 1892 A
Uebermässiges, ungewöhnliches Wachsthum der Schneidezähne bei Nagethieren.
Deutsche Monatsschr. Zahnheilk., x, 1-5, 4 figs.
There is a bibliography of 13 titles.

Bruch, C. 1853 A
Ueber die Entwickelung der Clavicula und die Farbe des Blutes.
Zeitschr. wiss. Zool., iv, 371-376.

—— 1862 A
Vergleichung des Schädels mit der Wirbelsäule des Lachses, mit einer Aufzählung sämmtlicher Skelettheile desselben nach der Art ihrer Zusammensetzung.
Abh. Senckenb. naturf. Ges., iv, 73-130, 10 text-figs.

Bruch, Phil. 1853 A
Monographische Uebersicht der Gattung *Larus* Lin.
Jour. Ornith., i, 96-108.

Brühl, Carl Bernhard 1862 A
Icones ad zootomiam illustrandam: Das Skelet der Crocodile dargestellt in 20 Tafeln.
Folio, Vienna, 1862.

Bruni, Angelo Cesare 1910 A
Sui primi stadi di sviluppo della colonna vertebrale dei Rettili e degli Uccelli.
Atti Accad. Sci. Torino, xlv, 750-757, 1 pl.

Brunner, Josef 1904 A
The vanishing beaver, the original woodcutter, engineer and irrigator.
Country Life in America, v, 476-481, 523-526, 18 text-figs.

Brunner, Josef—Continued 1905 A
The devastating squirrel. Some evidence that he is an enemy of the forest, since he destroys the birds that would keep down harmful insects.
Country Life in America, vii, 264-269, 9 text-figs.

Bruyère, Henri 1901 A
Le *Ceratodus*.
La Nature, xxix, 89-91, 1 text-fig.

Bryan, Kirk 1923 A
Erosion and sedimentation in the Papago Country, Arizona.
Bull. U. S. Geol. Surv., dccxxx, 19-90, map, pls. x-xviii, 25 text-figs.

—— 1927 A
The "Palouse soil" problem, with an account of elephant remains in wind-borne soil on the Columbia Plateau of Washington.
Bull. U. S. Geol. Surv., dccxc, 19-45, pls. iv-vii.

——, and **J. W. Gidley** 1926 A
Vertebrate fossils and their enclosing deposits from the shores of Pleistocene Lake Cochise, Arizona.
Amer. Jour. Sci. (5), xi, 477-488, 2 figs.

Bryan, William Alanson 1927 A
A Pleistocene park in the making.
Mus. Graphic, i, 77-82, with figs.

Bryant, Harold C. 1914 A
Teeth of a cestraciont shark from the Upper Triassic of northern California.
Bull. Dept. Geol., Univ. Calif., viii, 27-30, 2 text-figs.
Abstracts in Geol. Zentralbl., xxi, 623; xxix, 477.

—— 1914 B
Vertebrate fauna of the Triassic limestones at Cow Creek, Shasta County, California.
Bull. Geol. Soc. Amer., xxv, 155 (abstract).

Bryant, William L. 1916 A
The restoration of *Dinichthys magnificus* Hussakof and Bryant.
Buffalo Soc. Nat. Sci. A brochure without title, 9-11, 1 plate.

—— 1919 A
On the structure of *Eusthenopteron*.
Bull. Buffalo Soc. Nat. Sci., xiii, 1-23, pls. i-xviii, 8 text-figs.
Noticed in Amer. Jour. Sci. (4), l, 240.

—— 1924 A
A new species of *Bothriolepis* from the Upper Devonian of Canada.
Bull. Buffalo Soc. Nat. Sci., xiii, No. 3, 54-55, pls. i, ii.

Bryant, William L.—Continued 1926 A

Evidence of the presence of chordates in the Cambrian.

Bull. Geol. Soc. Amer., xxxvii, 236 (abstract).

—— 1926 B

On the structure of *Palæaspis* and on the occurrence in the United States of fossil fishes belonging to the family Pteraspidæ.

Proc. Amer. Philos. Soc., lxv, 256-271. pls. i-iii, 3 text-figs.

——. See **Hussakof** and **Bryant**.

Buckland, Francis Trevelyan 1838 A

On fossil remains of *Megatherium*.

Rep. Brit. Assoc. Adv. Sci., 1st and 2d Meet., 1837 (1838), 104-107.

Abstract in Neues Jahrb. Min. Geogr. Geol. Jahrg., 1834, Ref., 112-113.

Buckley, E. C. 1903 A

Distribution of mastodon remains in Wisconsin.

Science (n.s.), xvii, 297.

Buckley, S. B. 1866 A

A preliminary report of the geological and agricultural survey of Texas, Austin, 1866.

Pages 1-81, with appendix, pages 1-4.

—— 1874 A

First annual report of the Geological and Agricultural survey of Texas, Houston, 1874.

Pages 1-142.

—— 1876 A

Second annual report of the geological and agricultural survey of Texas, Houston, 1876.

Pages 1-96.

Bugnion, E. 1901 A

L'articulation de l'epaule chez les animaux et chez l'homme.

C. R. Assoc. Anatomistes, Lyons, iii, 93-104, figs. 1, 2.

Buist, T. P. 1912 A

On the development of the pectoral girdle in the pipefish (*Syngnathus acus*).

Ann. Mag. Nat. Hist. (8), x, 613-621, pls. xiii.

Bulman, O. M. B., and W. F. **Whittard** 1926 A

On *Branchiosaurus* and allied genera (Amphibia).

Proc. Zool. Soc. Lond., 1926, 533-579, pls. i-iii, 15 text-figs.

The synonymy and literature are cited under the various species.

Burckhardt, R. 1902 A

Das Problem des antarktischen Schöpfungscentrums vom Standpunkt der Ornithologie.

Zool. Jahrb. Syst., xv, 499-536.

See Neues Jahrb. Min. Geol. Pal., 1905, i, Ref., 338-339.

—— 1903 A

IV. Skeletsystem. D: Palaeontologisches.

Jahresber. Anat. Entwickl. (N.F.), viii, pt. 3, 77-129.

On pages 77-84 is a list of papers, abstracts of most of which are presented on the succeeding pages.

—— 1905 A

Spezielle Anatomie und Entwicklungsgeschichte des Menschen und der Wirbeltiere. IV. Skeletsystem. D: Paläontologisches.

Jahresber. Anat. Entwickl. (N.F.), x, Abt. 3, 145-187.

On pages 145-153 is a list of the papers, abstracts of which are presented on the succeeding pages.

—— 1906 A

Skeletsystem. Paläontologisches.

Jahresber. Anat. Entwickl. (N.F.), xi, pt 3, 149-185.

On pages 149-154 are listed titles of 137 papers, résumés of some of which are presented on the succeeding pages.

Burden, Douglas 1927 A

The quest for the dragon of Komodo.

Nat. Hist., xxvii, 3-18, 20 figs.

Burlet, H. M. de 1913 A

Zur Entwicklungsgeschichte des Walschädels. I: Über das Primordialcranium eines Embryo von *Phocæna communis*.

Morphol. Jahrb., xlv, 523-556, pls. xv-xvii, 24 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xix, pt. 3, 46-49.

—— 1913 B

Über einen rudimentären Wirbelkörper an der Spitze des Dens epistrophei bei einem Embryo von *Bradypus cuculli*.

Morphol. Jahrb., xlv, 393-408, 12 figs.

The bibliography includes 40 titles.

Burlet, H. M. de—Continued 1913 C

Zur Entwicklungsgeschichte des Walschädels. II: Das Primordialcranium eines Embryo von *Phocæna communis* von 92 mm.

Morphol. Jahrb., XLVII, 645-676, 2 pls., 25 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 46-49.

—— 1914 A

Zur Entwicklungsgeschichte des Walschädels. III: Das Primordialcranium eines Embryo von *Balænoptera rostrata* (105 mm.).

Morphol. Jahrb., XLIX, 119-178, pls. i-vii, 33 text-figs.

For No. I, see vol. XLV; for No. 2, vol. XLVII.

—— 1914 B

Zur Entwicklungsgeschichte des Walschädels. IV: Über das Primordialcranium eines Embryo von *Lagenorhynchus albirostris*.

Morphol. Jahrb., XLIX, 393-406, 9 text-figs.

—— 1916 A

Zur Entwicklung des Walschädels. V: Zusammenfassung des über den Knorpelschädel der Wale Mitgeteilten.

Morphol. Jahrb., L, 1-18, 7 figs.

—— 1917 A

Beiträge zur Entwicklungsgeschichte der Wirbelsäule der Cetaceen.

Morphol. Jahrb., L, 373-402, 19 figs.

The bibliography includes 22 titles.

Burmeister, H. 1868 A

Mammifera pinnata Argentina.

An. Mus. Nac. Buenos Aires, I, 301-366, pls. xv-xx.

Presents a detailed description of *Epiodon australe*.

—— 1868 B

Erwiderung auf die briefliche Mittheilung des Herrn Dr. J. Reinhardt, die Hautbedeckung der Gravigraden betreffend.

Arch. Anat. Physiol. Med., 1868, 759-762.

—— 1868 C

Bericht über ein Skelet von *Machaerodus*, im Staats-Museum zu Buenos Aires.

Abh. naturf. Ges. Halle, X, 181-196, 1 pl.

The animal is now known as *Smilodon neogæus*.

Burmeister, H.—Continued 1869 A

Descripcion de cuatro especies de delfinides de la costa Argentina en el Oceano Atlantico.

An. Mus. Nac. Buenos Aires, I, 367-470, pls. xxi-xxviii.

—— 1881 A

Bericht über ein Skelet von *Scelidotherium leptocephalum*.

Monatsber. Akad. Wiss. Berlin, 1881, 374-381, 1 plate.

—— 1885 A

Berichtigung zu *Cœlodon*.

Sitz.-Ber. Akad. Wiss. Berlin, 1885, II, 567-573, pl. v.

—— 1886 A

Weitere Bemerkungen über *Cœlodon*.

Sitz.-Ber. Akad. Wiss. Berlin, 1886, I, 357-358.

—— 1886 B

Nachmalige Berichtigung zu *Cœlodon*.

Sitz.-Ber. Akad. Wiss. Berlin, 1886, II, 1127-1132, 1 fig.

—— 1886 C

Osteologie der Gravigraden oder Riesen-Faulthiere.

In "Description physique de la République Argentine"; Atlas, section ii (Mammifères), livr. 3, 67-125, pls.

—— 1887 A

Neue Beobachtungen an *Cœlodon*.

Sitz.-Ber. Akad. Wiss. Berlin, 1887, II, 857-862, 2 figs.

Burne, R. H. 1891 A

On the variation and development of the leporine sternum.

Proc. Zool. Soc. Lond., 1891, 159-164, 5 figs.

—— 1905 A

Notes on the muscular and visceral anatomy of the leathery turtle (*Dermochelys coriacea*).

Proc. Zool. Soc. Lond., 1905, I, 291-324, text-figs. 55-73.

Burnett, Gilbert T. 1828 A

Illustrations of the Manupeda, or apes and their allies; being the arrangement of the Quadrumana or anthropomorphous beasts indicated in outline.

Quart. Jour. Sci. Lit. Art., XXVI, 301-307.

Burroughs, J. 1919 A

A question for the palæontologist on evolution.

Nat. Hist., XIX, 491.

See Matthew, W. D., 1919 A.

Bush, Lucy P. 1903 A

Note on the dates of publication of certain genera of fossil vertebrates.

Amer. Jour. Sci. (4), XVI, 96-98.

Abstract in Geol. Centralbl., V, 40.

Busk, George 1866 A

Remarks on the cranial and dental characters of the existing species of *Hyæna.*

Jour. Linn. Soc. Zool., IX, 59-79, pl. ii.

Butterworth, Emerson M. 1916 A

A new mustelid from the Thousand Creek Pliocene of Nevada.

Bull. Dept. Geol., Univ. Calif., X, 21-24, 1 text-fig.

Abstract in Rev. crit. Paléozool., XXI, 87; Geol. Zentralbl., XXIX, 473.

Butts, Charles 1903 A

Fossil faunas of the Olean quadrangle.

Bull. N. Y. State Mus., No. 69 (Paleont. 9), 990-995.

Buwalda, John P. 1914 A

Pleistocene beds at Manix in the eastern Mohave Desert region.

Bull. Dept. Geol. Univ. Calif., VII, 443-464, pls. xxii-xxv.

—— 1914 B

A proboscidean tooth from the Truckee beds of western Nevada.

Bull. Dept. Geol. Univ. Calif., VIII, 305-308, 1 text-fig.

Describes a fragment of a tooth identified as *Tetrabelodon?*

Abstracts in Rev. crit. Paléozool., XX, 42; Geol. Zentralbl., XXIX, 475.

—— 1914 C

Tertiary mammal beds of Stewart and Ione Valleys in west-central Nevada.

Bull. Dept. Geol. Univ. Calif., VIII, 335-363, pls. xxxii-xxxviii, 2 maps.

—— 1916 A

New mammalian faunas from Miocene sediments near Tehachapi Pass in the southern Sierra Nevada.

Bull. Dept. Geol., Univ. Calif., X, 75-85.

Abstracts in Rev. crit. Paléozool., XXI, 85; Geol. Zentralbl., XXIX, 445.

—— 1916 B

New Miocene mammalian fauna from the Tehachapi region (abstract).

Bull. Geol. Soc. Amer., XXVII, 170.

—— 1924 A

The age of the Payette formation and the old erosion surface in Idaho.

Science (n.s.), LX, 572-573.

"C. D." 1838 A

Bones of the mammoth.

Amer. Jour. Sci., XXXIII, 201.

Refers to finding of bones of mammoth in Rochester, New York.

Cabrera, Angel 1926 A

Sobre la alimentación del megaterio.

Bol. Soc. Espan Hist. Nat., XXVII, 388-391.

—— 1926 B

Crétáceos fósiles del Museo de la Plata.

Rev. Mus. La Plata, XXIX, 363-411, 19 figs.

The bibliography embraces 48 titles.

Cahall, W. C. 1890 A

The teeth as evidence of evolution.

Amer. Naturalist, XXIV, 224-236.

Cahn, Alvin R. 1922 A

Chlamytherium septentrionalis, a fossil edentate new to the fauna of Texas.

Jour. Mamm., III, 22-24, pls. ii, iii.

Call, R. Ellsworth 1889 A

Supposed mastodon found at Helena, Ark.

Rep. Geol. Surv. Ark., II, 39.

Callender, George 1868 A

The formation and early growth of the bones of the human face.

Proc. Roy. Soc. Lond., XVI, 447-449.

Calvin, Samuel 1897 A

Pleistocene of Iowa.

Ann. Iowa, III, 1-22, 3 plates and portrait of author.

—— 1897 B

The State Quarry limestone.

Proc. Iowa Acad. Sci., IV, 16-21.

—— 1901 A

Geology of Page County (Iowa).

Iowa Geol. Surv., XI, 399-460, with map.

—— 1909 A

Present phase of the Pleistocene problem in Iowa.

Bull. Geol. Soc. Amer., XX, 133-152, pls. i-v.

—— 1909 B

Aftonian mammalian fauna.

Bull. Geol. Soc. Amer., XX, 341-356, pls. xvi-xxvii.

For discussion of Aftonian sands and gravels see B. Shimek's paper, same volume, 399-408.

—— 1910 A

Administrative report.

Iowa Geol. Surv., XX, xi-xv.

Calvin, Samuel—Continued 1911 A
Aftonian mammalian fauna, II.
Bull. Geol. Soc. Amer., XXII, 207-216, pls. 18-24.
Abstract in Geol. Centralbl., XVIII, 521.

Camerano, L. 1915 A
Contributo allo studio dei wormiani palato palatini e dei wormiani medio palatini di Calori nei mammiferi.
Boll. Mus. Zool. Anat. Torino, XXX, No. 706, 1-8, pls. i-iv.

—— 1915 B
Osservazioni intorno alla bipartizione del lacrimale nei mammiferi ungulati artiodattili.
Boll. Mus. Zool. Anat. Torino, XXX, No. 707, 1-7, pls. i-iv.

—— 1916 A
Materiali per lo studio della partizione del nasale nei mammiferi ungulati artiodattili e nei carnivori.
Boll. Mus. Zool. Anat. Torino, XXXI, No. 709, 1-4, pls. i-iii.

—— 1916 B
Ricerche intorno all' "os supramaxilare accessorium" di Vrolik, alla partizione dell' intermascellare, e sulle ossificazioni che si trovano nella fontanella maxillo nasale dei mammiferi ungulati artiodattili e in alcuni carnivori.
Boll. Mus. Zool. Anat. Torino, XXXI, No. 710, 1-16, pls. i-vii.

Cameron, Allan Gordon 1910 A
The scent glands of ruminants.
Field, London, CXVI, 51.
Discusses also the classification of deer by their antlers.

—— 1910 B
Antlers and the classification of deer.
Field, London, CXVI, 154, 215.

Camp, Charles Lewis 1917 A
An extinct toad from Rancho La Brea.
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Bull. Amer. Mus. Nat. Hist., XXVIII, 183-188, 3 figs.

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Case, E. C.—Continued 1910 C

Description of a skeleton of *Dimetrodon incisivus* Cope.

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Jour. Geol. XXII, 243-259, 11 figs.

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Amer. Naturalist, XLVIII, 117-121, 1 fig.

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Case, E. C.—Continued 1914 C

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—— 1915 A

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Publ. Carnegie Instn. Wash., No. 207, 1-176, pls. i-xxiv, text-figs. 1-50.

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—— 1915 B

On a nearly complete skull of *Symbos cavifrons* Leidy from Michigan.

Occ. Papers Mus. Zool. Univ. Mich., No. 13, 1-3, pls. i, ii.

—— 1915 C

A mounted specimen of *Dimetrodon incisivus* Cope, in the University of Michigan.

Amer. Jour. Sci. (4), XL, 474-478, 6 text-figs.

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—— 1915 D

Notes on the Permo-Carboniferous genus *Cricotus* Cope.

Science (n.s.), XLII, 797-798.

—— 1916 A

Big game hunters who do not shoot.

The Inlander (Univ. Mich.), XIX, No. 3, 18-21.

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—— 1916 B

Further evidence bearing on the age of the Red Beds in the Rio Grande Valley, New Mexico.

Science (n.s.), XLIV, 708-709.

—— 1917 A

The environment of the amphibian fauna at Linton, Ohio.

Amer. Jour. Sci. (4), XLIV, 124-136, 2 figs.

—— 1917 B

Notes on the possible evidence of the presence of a *Pareiasaurus*-like reptile in the Conemaugh series of West Virginia.

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—— 1918 A

Permo-Carboniferous conditions *versus* Permo-Carboniferous time.

Jour. Geol., XXVI, 500-506, 1 fig.

Case, E. C.—Continued 1918 B

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Occ. Papers Mus. Zool. Univ. Mich., No. 62, 1-6, pls. i-ii.

—— 1919 A

Notes on a specimen of *Stylemys nebracensis* (Leidy).

Amer. Jour. Sci. (4), XLVII, 435-438, 5 figs.

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—— 1919 B

The environment of vertebrate life in the late Palæozoic in North America; a palæogeographic study.

Publ. Carnegie Instn. Wash., No. 283, i-vi, 1-273, tables, maps, 6 text-figs.

—— 1920 A

On a very perfect thoracic shield of a large labyrinthodont in the geological collections of the University of Michigan.

Occ. Papers Mus. Zool. Univ. Mich., LXXXII, 1-3, pl. 1.

Abstract in Rev. Geol. et Sci. con., IV, 1923, 90.

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—— 1920 B

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Jour. Geol. XXVIII, 524-535, 6 figs.

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—— 1920 C

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Rep. Mich. Acad. Sci., XXI, 119.

—— 1921 A

On an endocranial cast from a reptile *Desmatosuchus spurensis* from the Upper Triassic of western Texas.

Jour. Comp. Neur., XXXIII, 133-147, pls. i-iii.

—— 1921 B

A new species of *Ceratodus* from the Upper Triassic of western Texas.

Occ. Papers Mus. Zool. Univ. Mich., No. 101, 1-2, 1 fig.

—— 1921 C

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Publ. Carnegie Instn. Wash, Year Book No. 20, for 1921, 443-445.

Case, E. C.—Continued 1921 D

Criteria for the determination of the climatic environment of extinct animals.

Bull. Geol. Soc. Amer., XXXII, 333-338.

—— 1922 A

Study of the vertebrate fauna and palæogeography of North America in the Permian period, with special reference to world relations.

Publ. Carnegie Instn. Wash, Year Book No. 20, for 1921, 443-445.

—— 1922 B

New reptiles and stegocephalians from the Upper Triassic of western Texas.

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—— 1923 A

Review of Franz Baron Nopsca's Fortschritte der Geologie und Paleontologie der Reptilien.

Science (n.s.), LVIII, 517-518.

—— 1924 A

Some new specimens of Triassic vertebrates in the museum of geology of the University of Michigan.

Pap. Mich. Acad. Sci. Arts, IV, 419-424, pls. xxii-xxiv, text-figs. 9-12.

—— 1924 B

A possible explanation of fenestration in the primitive reptilian skull, with notes on the temporal region of the genus *Dimetrodon*.

Contrib. Mus. Geol. Univ. Mich., II, No. 1, 1-12, 4 figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1926, Ref., 82.

—— 1925 A

A specimen of *Stylemys nebrascensis* Leidy, with the skull preserved.

Contrib. Mus. Geol. Univ. Mich., II, 87-91, 7 figs.

—— 1925 B

Note on a new species of the Eocene crocodilian *Allognathosuchus, A. wartheni*.

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—— 1926 A

Genus *Cœlophysis* in the Upper Triassic beds of western Texas.

Geol. Soc. Amer. Prelim. list, XXXXIX, 54 (abstract).

Case, E. C.—Continued 1926 B

Environment of tetrapod life in the late Paleozoic of regions other than North America.

Publ. Carnegie Instn. Wash., No. 375, 1-211, 23 figs.

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Daniel, J. Frank 1914 A

The anatomy of *Heterodontus francisci*. I: The exoskeleton.

Univ. Calif. Publ., Zool., XIII, 147-166, pls. viii, ix, 4 text-figs.

Daniel, J. Frank—Continued 1915 A

The anatomy of *Heterodontus francisci*. II: The endoskeleton.

Jour. Morphol., XXVI, pp. 447-476, pls. i-viii, 3 text-figs.

—— 1916 A

The anatomy of *Heptanchus maculatus*. The endoskeleton.

Univ. Calif. Publ. Zool., XVI, 349-370, pls. xxvii-xxix, 8 text-figs.

—— 1922 A

The elasmobranch fishes.

Univ. Calif. Press, i-xi+1-334 pages, 260 figs.

Bibliographies are on pages 16-20, 40-42, 85-89, 118-122, 146-149, 162-163, 202-204, 227-228, 259-267, 295-299, 325-332.

Dareste, C. 1872 A

Sur les affinités naturelles des poissons de la famille des balistes.

C. R. Acad. Sci., Paris, LXXIV, 1527-1530. See also Jour. Zool. Paris, I, 268-272.

—— 1872 B

On the natural affinities of the Balistidæ.

Ann. Mag. Nat. Hist. (4), X, 68-71.

Reprinted from C. R. Acad. Sci. Paris LXXIV, 1527-1530.

Darrach, James 1847 A

[Letter on the mastodon, with measurements.]

Eager's "History of Orange County, N. Y.," 74-75.

—— 1852 A

Account of exhumation of mastodon.

In J. C. Warren's "The Mastodon giganteus of North America," Ed. 1, 1852, 172-174.

Dart, Raymond A. 1923 A

The brain of the Zeuglodontidæ (Cetacea).

Proc. Zool. Soc. Lond., 1923, 615-648, 652-654, 21 text-figs. With a note by C. W. Andrews.

The bibliography includes 60 titles.

Darton, Nelson H. 1901 A

Preliminary description of the geology and water resources of the southern half of the Black Hills and adjoining regions in South Dakota and Wyoming.

Rep. U. S. Geol. Surv., XXI, pt. iv, 489-599, pls. lviii-cxii, text-figs. 272-299.

—— 1905 A

Preliminary report on the geology and underground water resources of the central Great Plains.

U. S. Geol. Surv., Profess. paper No. xxxii, 1-433, 90 illustrations.

Darton, Nelson H.—Continued 1906 A

Fish remains in Ordovician rocks in Bighorn Mountains, Wyoming, with a résumé of Ordovician geology of the northwest.

Bull. Geol. Soc. Amer., XVII, 541-566, pls. lxxiii-lxxix, 6 text-figs.

—— 1908 A

Paleozoic and Mesozoic of central Wyoming.

Bull. Geol. Soc. Amer., XIX, 403-470, pls. xxi-xxx.

—— 1909 A

Discovery of fish remains in Ordovician of the Black Hills, South Dakota.

Bull. Geol. Soc. Amer., XIX, 567-568 (abstract).

—— 1910 A

A reconnaissance of parts of northwestern New Mexico and northern Arizona.

Bull. U. S. Geol. Surv., CDXXXV, 1-88, with maps and figs.

—— 1915 A

Guidebook of the western United States. Part C: The Santa Fe route, with a side trip to the Grand Canyon of the Colorado.

U. S. Geol. Surv., Bull. DCXIII, 1-194, 24 sheets, 42 pls. and 40 figs.

Abstract in Jour. Wash. Acad. Sci., v, 634.

——, and C. E. **Siebenthal** 1910 A

Postcambrian sedimentary rocks.

U. S. Geol. Surv. Folio CLXXIII, 5-11, with maps and figs.

Daubenton, Louis Jean Marie 1762 A

Mémoire sur des os et des dents remarquables par leur grandeur.

Mém. Acad. Sci., France, 1762 (1764), 206-229, pls. xiii-xiv.

Daubeny, Charles 1844 A

On the occurrence of fluorine in recent as well as in fossil bones.

Edinb. New Philos. Jour., XXXVII, 288-294.

Reprinted from Philos. Mag. Jour. Sci., XXV, 122.

Davenport, Gertrude C. 1898 A

Agassiz's work on the embryology of the turtle.

Amer. Naturalist, XXXII, 187-188.

Davidoff, M. 1879 A

Beiträge zur vergleichenden Anatomie der hinteren Gliedmasse der Fische.

Morphol. Jahrb., V, 450-520, pls. xxviii-xxxi.

For remarks by Gegenbaur on this paper see pages 521-525 of the same volume.

Davidson, Alvin 1895 A

A contribution to the anatomy and phylogeny of *Amphiuma means.*

Jour. Morphol., XI, 375-410, pls. xxiii, xxiv.

—— 1897 A

A preliminary contribution to the development of the vertebral column and its appendages.

Anat. Anz., XIV, 6-12, 7 figs.

Davidson, Pirie 1919 A

A cestracionf spine from the Middle Triassic of Nevada.

Bull. Dept. Geol. Univ. Calif., XI, 433-435, 2 text-figs.

Abstracts in Rev. crit. Paléozool., Paris, XXIV, 149; Geol. Zentralbl., XXIX, 477.

—— 1923 A

Alticamelus alexandræ, a new camel from the Barstow Upper Miocene of the Mohave Desert.

Bull. Dept. Geol. Univ. Calif., XIV, 397-408, 16 figs.

Abstracts in Rev. crit. Paléozool., XXVIII, 99, 1924; Geol. Zentralbl., XXXI, 218.

Davies, H. R. 1889 A

Die Entwicklung der Feder und ihre Beziehungen zu anderen Integumentbilden.

Morphol. Jahrb., XV, 560-645, pls. xxiii-xxvi.

With numerous citations of the literature.

Davies, W. 1863 A

Holoptychius v. *Glyptolepis.*

Geologist, VI, 135-136.

Davis, J. W. 1880 C

On the fish-remains found in the Cannel Coal in the Middle Coal-measures of the West Riding of Yorkshire, with the description of some new species.

Quart. Jour. Geol. Soc., XXXVI, 56-67, 3 figs.

—— 1881 B

On *Anodontacanthus,* a new genus of fossil fishes from the Coal-measures; with descriptions of three new species.

Quart. Jour. Geol. Soc., XXXVII, 427, 428, pl. xxii.

—— 1881 C

On *Palæospinax priscus* Egerton.

Ann. Mag. Nat. Hist. (5), VII, 429, 432, pl. xx.

Davis, J. W.—Continued 1884 A

On some remains of fossil fishes from the Yoredale series at Leyburn in Wensleydale.

Quart. Jour. Geol. Soc., XL, 614-635, pls. xxvi, xxvii.

—— 1892 A

See Hay, O. P., 1902 A, p. 75.

Review in Geol. Mag. (3), X, 72-75.

Dawkins, W. B. 1865 A

On the dentition of *Hyæna spelæa*, and its varieties.

Nat. Hist. Rev., V, 80-96, 6 figs.

—— 1878 A

Contributions to the history of the deer of the European Miocene and Pliocene strata.

Quar. Jour. Geol. Soc., XXXIV, 402-420, 17 text-figs.

Abstract in Nature, XVII, 255.

—— 1885 A

On a skull of *Ovibos moschatus* from the sea-bottom.

Quart. Jour. Geol. Soc., XLI, 242-244, 1 fig.

—— 1887 A

The British Pleistocene Mammalia. Part 6. British Pleistocene Cervidæ.

Pages 1-29, pls. i-vii. 4to. Palæontog. Soc., London.

—— 1915 A

The classification of the Tertiary strata by means of the eutherian mammals.

Geol. Mag. (6), II, 520-521 (Abstract).

Dawson, Alden B. 1925 A

The ossicle at the sternal end of the clavicle in the albino rat; the homologue of the sternal epiphysis of the clavicle in man.

Anat. Record, XXX, 205-210, 2 figs.

The bibliography presents 12 titles.

Dawson, George M. 1857 A

On the newer Pliocene and Post-Pliocene deposits of the vicinity of Montreal, with notices of fossils recently discovered in them.

Canad. Natural. Geol., II, 401-426, 2 text-figs.

—— 1884 A

Report on the region in the vicinity of the Bow and Belly Rivers, Northwest Territory.

Rep. Geol. Nat. Hist. Surv. Canada, 1882-1884, C, 1-156, with maps.

Dawson, George M.—Continued 1893 A

Notes on the occurrence of mammoth remains in the Yukon district of Canada and in Alaska.

Nature, XLIX, 94.

—— 1894 A

Abstracts in Geol. Mag. (3), X, 574-575; Canad. Rec. Sci., VI, 59.

—— 1899 A

Summary report on the operations of the Geological Surv[illegible] for the year 1898, by the Director.

Rep. Geol. Surv. Canad., XI, 1A-208A.

—— 1901 A

Summary report on the operations of the Geological Survey for the year 1900.

Rep. Geol. Surv. Canad., XIV, 1A-203A.

Dawson, J. W. 1854 A

On the Coal-measures of South Joggins, Nova Scotia.

Quart. Jour. Geol. Soc., X, 1-42, 25 figs.

Appended is a list of 24 papers referring to this subject.

—— 1863 F

Superficial geology of Canada.

Rep. Geol. Surv. Canad., 1863, 886-930.

In Hay, O. P., 1902 A, page 144, this article is wrongly credited to W. E. Logan.

—— 1870 B

Note on some animal remains from the Carboniferous and Devonian of Canada.

Nature, I, 271.

—— 1872 B

The Post-Pliocene geology of Canada.

Canad. Natural. Geol. (n.s.), VI, 19-42, 166-187, 241-259, 369-416, map, pls. ii-vii.

See Dawson, J. W., 1872 C.

—— 1872 C

Notes on the Post-Pliocene geology of Canada; with especial reference to the conditions of accumulation of the deposits and the marine life of the period.

Montreal, 8vo., i-vi+1-112 pages, map, pls. ii-vii.

See Dawson, J. W., 1872 B.

—— 1888 A

Microsauria and *Dendrerpeton*.

Nature, XXXVII, 393.

Dawson, J. W.—Continued 1894 C

The Canadian ice age. Being notes on the Pleistocene geology of Canada, with especial reference to the life of the period and its climatic conditions.

Montreal, 8vo., i-x+1-301 pages, 10 pls., several text-figs.

—— 1894 D

Notes on the occurrence of mammoth remains in the Yukon district of Canada and in Alaska.

Quart. Jour. Geol. Soc. Lond., L, 1-9.

Day, E. C. H. 1865 A

On a head of *Hybodus delabechei.*

Geol. Mag., II, 565.

Day, Henry 1915 A

A note on the parasphenoid of a palæoniscoid.

Ann. Mag. Nat. Hist. (8), XVI, 421-434, 3 text-figs.

Dean, Bashford 1891 A

Abstract in Geol. Mag. (3), VIII, 513.

—— 1893 E

Contributions to the anatomy of *Dinichthys.*

Trans. N. Y. Acad. Sci., XII, 187-188 (Abstract).

—— 1895 B

Notes of the ancestral sharks.

Anat. Anz., XI, 424.

—— 1895 C

Notes on the early development of the ganoids, *Lepidosteus, Acipenser* and *Amia.*

Rep. Brit. Assoc. Adv. Sci., LXV, Ipswich, 1895, 734.

A brief abstract.

—— 1896 D

On the early development of ganoids.

C. R. Congr. internat. Zool., III, Leyde, 1895 (1896), 336-346.

—— 1900 A

The so-called Devonian lamprey, *Palæospondylus gunni;* with notes on the systematic arrangement of the fish-like vertebrates.

Mem. N. Y. Acad. Sci., II, 1-32, pl. 1, 1 text-fig.

Reviewed by C. R. Eastman, Jour. Geology, VIII, 286-289.

—— 1900 B

The Jay Terrell collection of fossil fishes.

Amer. Mus. Jour., I, 10-12, 1 text-fig.

A popular account of the dinichthyids.

Dean, Bashford—Continued 1900 C

On the embryology and phylogeny of *Chimæra.*

Science (n.s.), XI, 169-170.

—— 1901 A

On two new arthrodires from the Cleveland shale of Ohio.

Mem. N. Y. Acad. Sci., II, 87-100, pls. ii-vi, 2 text-figs.

Abstracts in Geol. Centralbl., III, 122; Neues Jahrb. Min., Geol., Pal., 1903, I, Ref., 339-342; Rev. crit. Paléozool., VI, 68.

—— 1901 B

On the characters of *Mylostoma* Newberry.

Mem. N. Y. Acad. Sci., II, 101-109, pls. vii, viii, 8 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 339-342; Geol. Centralbl., III, 116; Rev. crit. Paléozool., VI, 68.

—— 1901 C

Further notes on the relationships of the Arthrognathi.

Mem. N. Y. Acad. Sci., II, 110-123, text-figs. 11-18.

Abstracts in Geol. Centralbl., III, 121; Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 339-342; Rev. crit. Paléozool., VI, 68.

—— 1902 A

Historical evidence as to the origin of the paired limbs of vertebrates.

Amer. Naturalist, XXXVI, 767-776, 1 text-fig.

Abstracts in Geol. Centralbl., IV, 297; Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 313-314; Rev. crit. Paléozool., VII, 75-76.

—— 1902 B

Biometric evidence in the problem of the paired limbs of the vertebrates.

Amer. Naturalist, XXXVI, 837-847, with 1 text-fig.

Abstract in Geol. Centralbl., IV, 297.

—— 1902 C

Review of O. P. Hay's "Bibliography and catalogue of the fossil Vertebrata of North America." (Hay, O. P., 1902 A.)

Science (n.s.), XVI, 701-703.

—— 1902 D

The preservation of muscle-fibres in sharks of the Cleveland shale.

Amer. Geologist, XXX, 273-278, pls. viii, ix.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 478; Geol. Centralbl., IV, 300; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 89.

—— 1903 A

An outline of the development of a chimæroid.

Biol. Bull., IV, 270-286, 19 text-figs.

Dean, Bashford—Continued 1904 A

In the matter of the Permian fish *Menaspis*.

Amer. Geologist, XXXIV, 49-53, pl. ii.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 159.

—— 1904 B

L'oeuf de *Chimæra colliei* et l'adaptation de sa capsule.

C. R. Soc. Biol. Mém., LVII, 14-15.

—— 1904 C

Fossil fishes in the American Museum of Natural History.

Science (n.s.), XIX, 437.

—— 1904 D

Review of Traquair's "The Lower Devonian Fishes of Gemünden."

Science (n.s.), XIX, 64-65.

—— 1904 E

Evolution in a determinate line as illustrated by the egg-cases of chimæroid fishes.

Biol. Bull., VII, 105-112.

—— 1906 A

Notes on the living specimens of the Australian lungfish, *Ceratodus forsteri*, in the Zoological Society's collection.

Proc. Zool. Soc. Lond., 1906, 168-178, pl. ix, text-figs. 53-55.

—— 1906 B

Chimæroid fishes and their development.

Publ. Carnegie Instn. Wash. No. 32, 1-194, pls. i-xi, 144 text-figs.

The extensive bibliography occupies pages 159-172.

Reviewed in Amer. Naturalist, XLI, 132-133; notice in Nature, LXXVI, 1907, 67; Rev. crit. Paléozool., XI, 90-93.

—— 1907 A

Dr. Eastman's recent papers on the kinship of the arthrodires.

Science (n.s.), XXVI, 46-50.

Abstract in Rev. crit. Paléozool., XII, 86-90.

—— 1907 B

Notes on acanthodian sharks.

Amer. Jour. Anat., VII, 209-222, 36 text-figs.

Abstract in Rev. crit. Paléozool., XII, 17-19.

—— 1908 A

Studies on fossil fishes during the year 1907.

Science (n.s.), XXVII, 201-205.

Dean, Bashford—Continued 1909 A

The giant of ancient sharks.

Amer. Mus. Jour., IX, 232-234, 1 fig.

Abstract in Geol. Centralbl., XIV, 339.

—— 1909 B

A review of Gaskell's "The origin of the Vertebrata."

Science (n.s.), XXIX, 816-818.

—— 1909 C

Studies on fossil fishes (sharks, chimæroids and arthrodires).

Mem. Amer. Mus. Nat. Hist., IX, 211-287, pls. xxvi-xli, 65 text-figs.

On page 248 is a bibliography of 23 titles.

Abstracts in Geol. Centralbl., XV, 312; Rev. crit. Paléozool., 13, 211-213; Nature, LXXXV, 285.

—— 1911 A

Note on the Ohio placoderm *Dinichthys terrelli*.

Science (n.s.), XXXIV, 801.

—— 1911 B

Collecting fossil fishes in Ohio.

Amer. Mus. Jour., XI, 302-303, 2 figs.

—— 1912 A

Symposium on ten years progress in vertebrate paleontology. Paleozoic fishes.

Bull. Geol. Soc. Amer., XXIII, 224-228.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Lull, Hay, Merriam, Eastman, Osborn, Williston and Sinclair.

—— 1912 B

Orthogenesis in the egg capsules of *Chimæra*.

Bull. Amer. Mus. Nat. Hist., XXI, 35-40, 2 figs.

—— 1914 A

Recent and extinct fishes.

Rep. Amer. Mus. Nat. Hist., XLV, 1913 (1914), 59-61.

A report of progress in the department of ichthyology and herpetology.

—— 1919 A

Memorial of Charles Rochester Eastman.

Bull. Geol. Soc. Amer., XXX, 27-36, portrait.

On pages 31-36 is a list of Eastman's published papers, more than 100 in number.

—— 1923 A

The department of fishes, American Museum; its aims and achievements.

Nat. Hist., XXIII, 606-615, with figs.

Dean, B., and R. **Eastman** 1916 A

A bibliography of fishes.

Vol. I, A-K, i-xii+1-718 pages.

Published by the American Museum of Natural History.

See Finding Index on pages 667 to 707 of volume III.

——, —— 1917 A

A bibliography of fishes.

Vol. II, L-Z, i-vi+1-701 pages.

Published by the American Museum of Natural History, New York.

See Finding Index on pages 667 to 707 of volume III.

——, E. W. **Gudger,** and A. W. **Henn** 1923 A

A bibliography of fishes.

Vol. III; indices, etc.; i-xvi+1-707 pages.

Published by the American Museum of Natural History, New York.

See Finding Index on pages 667-707.

Reviewed in Nat. Hist. XXIV, 392-395, 395-401, 523-525; Science, LX, 12-15.

Deane, J. 1845 A

Abstract in Quart. Jour. Geol. Soc., I, 141.

De Brahm, —— 1786 A

Description of bones, etc., from near the river Ohio.

Columbian Magazine [Philadelphia], I, 103-107, plate.

By Col. De Brahm, *fide* Samuel Mitchill in Cuvier's "Theory of the earth," 1818, 364.

De Burlet, H. M. See **Burlet,** H. M. de.

Dederer, Pauline H. 1909 A

Comparison of Cænolestes with Polyprotodonta and Diprotodonta.

Amer. Naturalist, XLIII, 614-618, 2 text-figs.

Deecke, W. 1913 A

Paläontologische Betrachtungen. IV: Über Fische.

Neues Jahrb. Min. Geol. Pal., 1913, II, 69-92.

—— 1926 A

Über die Triasfische.

Palaeont. Zeitschr., VIII, 184-198.

Deeley, R. M. 1913 A

North American and European drift deposits.

Geol. Mag. (5), X, 14-17, with a folding plate.

Deere, E. O. 1908 A

A fossil tusk found in the Equus beds in McPherson County.

Trans. Kansas Acad. Sci., XXI, 115-117, 2 text-figs.

The tusk was supposed to be that of *Mammut americanum,* but no other parts were found.

Degener, Lyda May 1924 A

The development of the dentary bone and teeth of *Amia.*

Jour. Morphol., XXXIX, 113-139, pls. i-viii, 1 text-fig.

The bibliography presents 24 titles.

De Gregorio, Antonio 1916 A

Molari elefantini americani.

Naturalista Sicil., XXIII, 104.

DeHaas, Willis 1886 A

[Letter to Davenport Academy of Science on "elephant mounds."]

Proc. Davenport Acad. Sci., IV, 317-318.

Deichmüller, J. V. 1884 A

Branchiosaurus petrolei Gaudry sp. aus der unteren Dyas von Autun, Oberhof und Niederhässlich.

Mitt. Mus. Dresden, Heft 6, 1-17, 1 pl.

Deinse, A. B. van 1912 A

The sutura parietalis of the mammals.

Anat. Anz., XLI, 347-351, 1 text-fig.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 48.

—— 1914 A

Again the sutura parietalis of the mammals.

Anat. Anz., XLV, 289-300, 6 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 50.

—— 1916 A

Die Variationen im Visceralskelett von *Acanthias vulgaris,* über das Visceralskelett von *Lamna cornubica* und seine Kalkverdeckung.

Anat. Anz., XLIX, 417-449, 14 figs.

The bibliography comprises 7 titles.

—— 1916 B

Die Flossenversteifung der Cetaceen.

Anat. Anz., XLIX, 521-524, 4 figs.

De la Beche, H. T. 1848 A

Anniversary address before the Geological Society of London.

Quart. Jour. Geol. Soc., IV, XXI-CXX.

——, and W. D. **Conybeare** 1821 A

Notice of the discovery of a new fossil animal, forming a link between the *Ichthyosaurus* and the crocodile, together with general remarks on the osteology of the *Ichthyosaurus.*

Trans. Geol. Soc. Lond. (1), V, 559-594, pls. xxxiii-xlii.

Delafontaine, Marc. 1875 A

Les vertébrés fossiles des mauvaises terres du Nebraska, etc.

Arch. Sci. Phys. Nat., LIII, 169-176.

Delafontaine, Marc.—Continued 1877 A
Les *Dinichthys,* genre nouveau de poissons dévoniens.
Bull. Assoc. Sci. France, xx, 266-268.

—— 1877 B
Remarks on pteranodonts.
Arch. Sci. Phys. Nat., lix, 1877, 127.

Delsman, H. C. 1913 A
Der Ursprung der Vertebraten. Eine neue Theorie.
Mitt. Zool. Stat. Neapel, xx, 647-710, 9 text-figs.
The literature cited is listed on pages 706-710.
Abstract in Jahresber. Anat. Entwickl. (N.F.), xix, pt. 3, 31.

—— 1924 A
The origin of vertebrates.
Amer. Jour. Sci. (5), viii, 151-158.

Demoll, R. 1921 A
Die Vererbbarkeit somatischer Erwerbungen.
Arch. Entwickl.-mech. Organ., xlvii, 443-451, pls. xv-xvi, 1 text-fig.

Dendy, Arthur 1899 A
Outlines of the development of the Tuatara, *Sphenodon* (*Hatteria*) *punctatus.*
Quart. Jour. Micr. Sci. (n.s.), xlii, 1-87, pls. i-x.
The list of references embraces 20 titles.

—— 1899 B
On the development of the parietal eye and adjacent organs in *Sphenodon* (*Hatteria*).
Quart. Jour. Micr. Sci. (n.s.), xlii, 111-153, pls. xi-xiii.
There are 38 titles in the list of references.

—— 1907 A
The pineal gland.
Sci. Progress, ii, 284-306, 4 figs.

Deniker, J. 1909 A
Autour du *Diplodocus.*
La Nature, ii, 221-222, 2 text-figs.

—— 1913 A
La nourriture du mammouth.
L'Anthropologie, xxiv, 117.

Deninger, K. 1913 A
Studien über die Stammesgeschichte der Proboscidier.
Zeitschr. indukt. Abstamm. Vererbl., x, 295-296.
A review of Schlesinger, G., 1912 A.

—— 1914 A
Skeletsystem. Paläontologisches.
Jahresber. Anat. Entwickl. (N.F.), xviii, pt. 3, 181-214.

Deninger, K.—Continued 1915 A
Skeletsystem. Paläontologisches.
Jahresber. Anat. Entwickl. (N.F.), xix, pt. 3, 181-191.
A list of 239 papers, without abstracts.

Denker, Alfred 1901 A
Zur Anatomie des Gehörorgans der Monotremata.
Semon's "Zool. Forschungsr. in Austral.," iii, 635-662, pls. xxi, xxii, 2 text-figs.

—— 1902 A
Zur Anatomie des Gehörorgans der Cetacea.
Anat. Hefte, Arb., xix, 421-448, pls. xiv, xv.
The bibliography notes titles of 10 papers.

Denton, William 1875 A
On an asphalt bed near Los Angeles, Cal., and its contained fossils.
Proc. Bost. Soc. Nat. Hist., xviii, 185-186.

DePauw, L. F. 1902 A
Contribution à l'étude de *l'Iguanodon bernissartensis.* Essai de reconstitution de l'iguanodon dans le milieu où il vivait.
Mém. Soc. Sci., Hainaut (6), iv, 85-95, pls. i-vi.

Dependorf, Theodor 1898 A
Zur Entwickelungsgeschichte des Zahnsystems der Marsupialier.
Semon's "Zool. Forschungsr. in Austral.," iii, 243-402, pls. ii-xi, 14 text-figs.
The bibliography embraces 65 titles.

—— 1907 A
Zur Frage der sogenannten Konkreszenztheorie.
Jena. Zeitschr. Naturwiss., xlii, 539-566, 19 text-figs.

—— 1907 B
Zur Frage der sogenannten Konkreszenztheorie. Eine Entgegnung auf Dr. Adloff's Aufsatz: "Zur Frage der Konkreszenztheorie."
Jena. Zeitschr. Naturwiss., xliii, 802-808.

—— 1907 C
Der Diphyodontismus der Säuger und die Stellung der Milchzahnreihe in diesem System.
Corresp.-Bl. Zahnärzte, xxxvi, 97-110.

Depéret, C. 1892 A
La faune de mammifères miocènes de la Grive-Saint-Alban (Isère).
Arch. Mus. hist. nat. Lyon, v, 1-95, pls. i-iv (See Hay, O. P., 1902 A, p. 79).

Depéret, C.—Continued 1896 A

Note sur les dinosauriens sauropodes et théropodes du Crétace supérieur de Madagascar.

Bull. Soc. géol. France (3), XXIV, 176-194, pl. vi, 2 text-figs.

—— 1900 A

Note sur de nouveaux dinosauriens du Crétacé supérieur de la Montagne-Noire.

Bull. Soc. géol. France (3), XXVIII, 530.
Abstract in Geol. Centralbl., I, 94. 1901.

—— 1901 A

Révision des formes européennes de la famille des hyracothéridés.

Bull. Soc. géol. France (4), I, 199-225, pls. iv, v.

For abstracts see Neues Jahrb. Min. Geol. Pal., 1903, I, 351-353; Geol. Centralbl., II, 442; Rev. crit. Paléozool., VI, 1.

—— 1902 A

Sur les caractères craniens des *Lophiodon*.

Bull. Soc. géol. France (4), II, 323-324.
Abstract in Geol. Centralbl., III, 555.

—— 1902 B

Sur la patte antérieure des *Lophiodon*.

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—— 1902 E

Notice of interesting new forms of Carboniferous fish remains.

Amer. Naturalist, xxxvi, 849-854, 2 text-figs.

Abstracts in Geol. Centralbl., iv, 292; Neues Jahrb. Min. Geol. Pal., 1905, ii, Ref., 138; Rev. crit. Paléozool., vii, 135; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 151.

—— 1902 F

Phylogeny of the cestraciont group of sharks.

Science (n.s.), xvi, 267.

—— 1902 G

The carboniferous fish-fauna of Mazon Creek, Illinois.

Jour. Geol., x, 535-541, 4 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, i, Ref., 140; Geol. Centralbl., iv, 291; Rev. crit. Paléozool., vii, 83.

—— 1902 H

On *Campyloprion*, a new form of *Edestus*-like dentition.

Geol. Mag. (4), ix, 148-152, pl. viii, text-fig. 3.

Abstracts in Geol. Centralbl., iii, 120; Rev. crit. Paléozool., vii, 136; Jahresber. Anat. Entwickl. (N.F.), viii, pt. 3, 89.

—— 1902 I

Devonian fish fauna of Iowa.

Bull. Geol. Soc. Amer., xiii, 537. Abstract.

—— 1903 A

Sharks' teeth and cetacean bones from the red clay of the tropical Pacific.

Mem. Mus. Comp. Zool., xxvi, 179-189, pls. i-iii, 5 text-figs.; Rev. crit. Paléozool., vii, 195.

Abstract in Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 150.

—— 1903 B

Carboniferous fishes from the central western States.

Bull. Mus. Comp. Zool., xxxix, 163-226, pls. i-v, 17 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, i, Ref., 140-142; Geol. Centralbl., v, 485-486; Rev. crit. Paléozool., vii, 195; x, 208.

Eastman, C. R.—Continued 1903 C

A peculiar modification amongst Permian dipnoans.

Amer. Naturalist, xxxvii, 493-495, 2 text-figs.

Abstracts in Geol. Centralbl., v, 463; Neues Jahrb. Min. Geol. Pal., 1905, ii, Ref., 477; Rev. crit. Paléozool., viii, 90.

—— 1903 D

On the nature of *Edestus* and related forms.

Mark Anniversary Volume, 279-289, pl. xxi.

Abstracts in Geol. Centralbl., vii, 621; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 151.

—— 1903 E

[On alleged appendages of *Tremataspis*].

Amer. Naturalist, xxxvii, 573-577, 2 text-figs.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 161; Rev. crit. Paléozool., viii, 91-92.

—— 1904 A

Earliest notice of American Proboscidea.

Science (n.s.), xx, 890.

—— 1904 B

Upper Devonian fish remains from Colorado.

Amer. Jour. Sci. (4), xviii, 253-260, 6 text-figs.

Abstract in Geol. Centralbl., vi, 719; Rev. crit. Paléozool., ix, 10.

—— 1904 C

Asterolepid appendages.

Amer. Jour. Sci. (4), xviii, 141-144.

Abstract in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 160; Rev. crit. Paléozool., ix, 10.

—— 1904 D

Fossil plumage.

Amer. Naturalist, xxxviii, 669-672, 1 text-fig.

Abstract in Geol. Centralbl., vii, 618-619.

—— 1904 E

On the dentition of *Rhynchodus* and other fossil fishes.

Amer. Naturalist, xxxviii, 295-299, 2 text-figs.

Abstracts in Geol. Centralbl., vii, 620-621; Rev. crit. Paléozool., x, 30-31.

—— 1904 F

Marginal and ridge scales in *Cephalaspis* and *Drepanaspis*.

Science (n.s.), xix, 703-704.

Eastman, C. R.—Continued 1904 G

A recent paleontological induction.

Science (n.s.), xx, 465-466.

—— 1904 H

Pisces [of Miocene of Maryland].

Maryland Geol. Surv. Miocene, 71-93, pls. xxviii-xxxii.

Abstracts in Geol. Centralbl., vii, 621; x, 373.

—— 1904 I

The earliest mention of fossil fishes.

Science (n.s.), xx, 648-649.

—— 1905 A

A brief general account of fossil fishes.

Rep. Geol. Surv. New Jersey, 1904 (1905), 27-66, 8 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1908, ii, Ref., 442; Geol. Centralbl., xi, 333-334; Rev. crit. Paléozool., x, 32; Jahresber. Anat. Entwickl. (N.F.), xi, pt. 3, 156.

—— 1905 B

The Triassic fishes of New Jersey.

Rep. Geol. Surv. New Jersey, 1904 (1905), 67-130, pls. i-xiv, text-figs. 9-13.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1908, ii, Ref., 442; Geol. Centralbl., xi, 334; Jahresber. Anat. Entwickl. (N.F.), xi, pt. 3, 156.

—— 1905 C

The literature of *Edestus*.

Amer. Naturalist, xxxix, 405-409.

Abstract in Geol. Centralbl., viii, 379.

There is a bibliography of 43 titles.

—— 1906 A

Dipnoan affinities of arthrodires.

Amer. Jour. Sci. (4), xxi, 131-143, 4 text-figs.

Abstracts in Geol, Centralbl., viii, 380; Nature, lxxiii, 1906, 422; Rev. crit. Paléozool., x, 207; Sci. Progress, i, 463.

—— 1906 B

Dipnoan affinities of arthrodires.

Science (n.s.), xxiii, 290.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xii, pt. 3, 159.

—— 1906 C

Sermons in stomach stones.

Science (n.s.), xxiii, 983.

—— 1906 D

Structure and relations of *Mylostoma*.

Bull. Mus. Comp. Zool., l, 1-29, pls. i-v, 8 text-figs.

Abstracts in Geol. Centralbl., xi, 475; Rev. crit. Paléozool., xi, 17-19; Jahresber. Anat. Entwickl. (N.F.), xi, pt. 3, 157.

Eastman, C. R.—Continued 1906 E

Sharks' teeth and cetacean bones.

Bull. Mus. Comp. Zool., l, 74-98, pls. i-iii, 7 text-figs.

Abstract in Rev. crit. Paléozool., xi, 73, 88.

—— 1907 A

Mylostomid dentition.

Bull. Mus. Comp. Zool., l, 209-228, pl. xix, 4 text-figs.

Abstract in Rev. crit. Paléozool., xi, 229.

—— 1907 B

Devonic fishes of the New York formations.

Ann. Rep. N. Y. State Mus., 60, v; memoir 10, 1-235, pls. i-xv, 34 text-figs.

Abstracts in Amer. Jour. Sci., 1907 (4), xxiv, 443-445; Neues Jahrb. Min. Geol. Pal., 1908, ii, Ref., 443-446; Geol. Centralbl., xi, 475-477; Sci. Progress, ii, 521-522; Rev. crit. Paléozool., xii, 14-17.

—— 1907 C

Types of fossil cetaceans in the Museum of Comparative Zoology.

Bull. Mus. Comp. Zool., li, 77-94, pls. i-iv, 2 text-figs.

Abstracts in Geol. Centralbl., xii, 220; Rev. crit. Paléozool., xii, 3.

—— 1908 A

Devonian fishes of Iowa.

Iowa Geol. Surv., xviii, 29-386, pls. i-xvi, 41 text-figs.

Abstracts in Geol. Centralbl., xv, 507-509; Amer. Jour. Sci. (4), xxvii, 415; Bull. Geol. Soc. Amer., xiii, 537; Zeitschr. Indukt. Abstamm.-Vererb.-Lehre, ii, 1909, 351-353; Rev. crit. Paléozool., xiii, 159-161; Ann. Mag. Nat. Hist. (8), iv, 71; Sci. Progress, iv, 674; Geol. Mag. (5), vi, 228.

—— 1908 B

Notice of a new cœlacanth fish from the Iowa Kinderhook.

Jour. Geol., xvi, 357-362, 1 text-fig.

Abstract in Geol. Centralbl., xiii, 204; Rev. crit. Paléozool., xiii, 85.

—— 1908 C

Discovery of a new species of *Cœlacanthus*.

Science (n.s.), xxvii, 355.

—— 1909 A

A new species of *Helodus*.

Ann. Carnegie Mus., v, 488-489.

Abstracts in Geol. Centralbl., xiv, 488; Rev. crit. Paléozool., xvii, 140.

—— 1909 B

Mylostomid dental plates.

Science (n.s.), xxix, 997-998.

—— 1909 C

Mylostomid palatal dental plates.

Bull. Mus. Comp. Zool., lii, 261-269, 3 text-figs.

Eastman, C. R.—Continued 1911 A

Triassic fishes of Connecticut.

Bull. Geol. Nat. Hist. Surv. Conn., XVIII, 1-77, pls. i-xi, 8 text-figs.

Abstracts in Geol. Centralbl., XIX, 569, 703; Rev. crit. Paléozool., XVII, 141.

Review in Jour. Geol., XXI, 377.

—— 1911 B

Jurassic saurian remains ingested within fish.

Ann. Carnegie Mus., VIII, 182-187, pls. x, xi.

Abstract in Geol. Centralbl., XIX, 444.

—— 1911 C

Catalog of fossil fishes in the Carnegie Museum. Part I: Fishes from the Upper Eocene of Monte Bolca.

Mem. Carnegie Mus., IV, 349-391, pls. xc-ci, 5 text-figs.

—— 1912 A

Symposium on ten years progress in vertebrate paleontology. Mesozoic and Cenozoic fishes.

Bull. Geol. Soc. Amer., XXIII, 228-232.

Abstract in Sci. Progress, VIII, 21.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Lull, Hay, Merriam, Dean, Osborn, Williston and Sinclair.

—— 1912 B

Tertiary fish-remains from Spanish Guinea in West Africa.

Ann. Carnegie Mus., VIII, 370-378, pls. xxiii-xxiv.

Abstract in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 478-479; Sci. Progress, VIII, 231.

—— 1912 C

Palæontology.

Amer. Year Book (1911), 656-660.

—— 1913 A

Brain structures of fossil fishes from the Caney shales.

Bull. Geol. Soc. Amer., XXIV, 119-120.

Abstract.

—— 1913 B

Palæontology.

Amer. Year Book (1912), 676-678.

—— 1914 A

Notes on Triassic fishes belonging to the families Catopteridæ and Semionotidæ.

Ann. Carnegie Mus., IX, 139-148, pls. xxx-xxxii.

Abstract in Rev. crit. Paléozool., XX, 142.

—— 1914 B

Palæontology.

Amer. Year Book (1913), 687-690.

Eastman, C. R.—Continued 1915 A

Dipterus remains from the Upper Devonian of Colorado.

Ann. Carnegie Mus., IX, 279-283, 4 text-figs.

Abstracts in Rev. crit. Paléozool., 141; Geol. Zentralbl., XXIX, 188.

—— 1915 B

Report of investigation on Palæozoic fishes.

Ann. N. Y. Acad. Sci., XXVI, 439-440.

—— 1915 C

Palæontology.

Amer. Year Boon (1914), 657-659.

—— 1916 A

Palæontology.

Amer. Year Book, 1915, 654-656.

—— 1916 B

Recent progress in vertebrate palæontology. Fishes.

Science (n.s.), XLIII, 103-105.

—— 1917 A

Fossil fishes in the collection of the United States National Museum.

Proc. U. S. Nat. Mus., LII, 235-304, pls. i-xxiii, 9 text-figs.

Note on, in Nature, CXIX, 330.

Abstracts in Rev. crit. Paléozool., XXII, 4; Geol. Mag. (6), IV, 223-224; Ann. N. Y. Acad. Sci., XXVI, 439-440; Neues Jahrb. Min. Geol. Pal., 1922, I, Ref., 131.

—— 1917 B

Palæontology.

The Amer. Year Book (1916), 654-657.

—— 1917 C

Campodus and *Edestus.*

Bull. Geol. Soc. Amer., XXVIII, 214 (abstract).

——, and E. H. **Barbour** 1902 A

Synopsis of the Missourian and Permo-Carboniferous fish fauna of Kansas and Nebraska.

Science (n.s.), XVI, 266-267.

A brief abstract.

——, **Gregory,** and **Matthew** 1917 A

Recent progress in paleontology.

Science (n.s.), XLV, 117-121.

Eaton, G. F. 1903 A

Notes on the collection of Triassic fishes at Yale.

Amer. Jour. Sci. (4), XV, 259-268, pls. v, vi.

Abstracts in Geol. Centralbl., V, 43; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 152.

Eaton, G. F.—Continued 1903 B

The characters of *Pteranodon*.

Amer. Jour. Sci. (4), XVI, 82-86, pls. vi, vii.

Abstracts in Geol. Centralbl., V, 42; Neues Jahrb. Min. Geol. Pal., 1905, I, 517.

—— 1904 A

Characters of *Pteranodon* (second paper).

Amer. Jour. Sci. (4), XVII, 318-320, pls. xix, xx.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 172; Geol. Centralbl., VII, 427.

—— 1905 A

Occurrences of *Mastodon humboldtii* in northern Mexico.

Amer. Jour. Sci. (4), XIX, 330.

—— 1908 A

The skull of *Pteranodon*.

Science (n.s.), XXVII, 254-255.

—— 1910 A

Osteology of *Pteranodon*.

Mem. Conn. Acad. Sci., II, 1-38, pls. i-xxxi.

Abstracts in Amer. Jour. Sci. (4), XXXI, 148-150; Geol. Centralbl., XVII, 335; Sci. Progress, V, 677; Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 143-145; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 210; Nature, LXXXIX, 123, fig.

—— 1914 A

Vertebrate fossils from Ayusbamba, Peru.

Amer. Jour. Sci. (4), XXXVII, 141-154, pls. v-vii, 7 text-figs.

—— 1922 A

John Day Felidæ in the Marsh collection.

Amer. Jour. Sci. (5), IV, 425-452, 12 figs.

Review in Rev. crit. Paléozool., XXVIII, 164, 1924.

Abstract in Geol. Zentralbl., XXIX, 222.

—— 1923 A

Vertebrate fossils from Mina Erupcion.

Amer. Jour. Sci. (5), VI, 229-238, 9 figs.

Abstract in Geol. Zentralbl., XXX, 538.

Eberlein, R. 1910 A

Ueber polydaktylie beim Pferde.

Arch. wiss. u. prakt. Tierheilk., XXXVI, Suppl. Bd., 72-92, pls. i-v.

The bibliography presents 62 titles.

Ebner, V. 1889 A

Urwirbel und Neugliederung der Wirbelsäule.

Sitz.-Ber. Akad. Wiss., Wien, XCVII, 194-206, pls. i, ii.

—— 1896 A

Über die Wirbel der Knochenfische und die Chorda dorsalis der Fische und Amphibien.

Sitz.-Ber. Akad. Wiss. Wien, CV, Abth, iii, 123-161, pls. i-iv, 1 text-fig.

Appended is a bibliography of 35 titles.

—— 1906 A

Über die histologischen Veränderungen des Zahnschmelzes während der Erhärtung, insbesondere beim Menschen.

Arch. mikr. Anat., LXVII, 18-81, pls. ii-v.

There is a bibliography consisting of 32 titles.

—— 1909 A

Ueber scheinbare und wirkliche Radiärfasern des Zahnbeines.

Anat. Anz., XXXIV, 289-309, 9 text-figs.

For a rejoinder to this paper see Korff, K., 1909 A.

Edgeworth, F. H. 1907 A

The development of the head-muscles in *Gallus domesticus*, and the morphology of the head-muscles in the Sauropsida.

Quart. Jour. Micr. Sci. (n.s.), LI, 511-556, 39 figs.

The bibliography records 27 titles.

—— 1920 A

On the development of the hypobranchial and laryngeal muscles in Amphibia.

Jour. Anat. Lond., LIV, 125-162, 15 pls.

In the bibliography are recorded 38 titles.

—— 1923 A

Note on the development of the quadrate and epihyal of *Ceratodus*.

Quart. Jour. Micr. Sci. (n.s.), LXVII, 359-368, figs. 31-39.

Four titles form the bibliography.

—— 1923 B

On the larval hyobranchial skeleton and musculature of *Cryptobranchus*, *Menopoma*, and *Ellipsoglossa*.

Jour. Anat. Lond., LVII, 97-105, 13 figs.

In the bibliography are 11 titles.

Edgeworth, F. H.—Continued 1923 C

On the quadrate in *Cryptobranchus, Menopoma,* and *Hynobius.*

Jour. Anat. Lond., LVII, 238-244, 11 figs.

—— 1923 D

On the development of the hypobranchial, branchial, and laryngeal muscles of *Ceratodus.* With a note on the development of the quadrate and epihyal.

Quart. Jour. Micr. Sci. (n.s.), LXVII, 325-368, 39 text-figs.

There are listed 23 titles in the bibliography.

—— 1925 A

On the autostylism of Dipnoi and Amphibia.

Jour. Anat. Lond., LIX, 225-264, pls. i-xxvi.

There is appended a bibliography of 63 titles.

—— 1926 A

On the hyomandibula of Selachii, Teleostomi and *Ceratodus.*

Jour. Anat. Lond., LX, 173-193, 23 figs.

18 titles are cited in the bibliography.

Edwards, Alphonse Milne 1840 A

Remarque sur les affinités naturelles du *Lepidosiren.*

Ann. Sci. nat. (2), XIV, 159-162.

—— 1866 A

Rapport sur diverses communications relatives à la paléontologie et la faune actuelle du Mexique.

Extract des Arch. Comm. Sci. Mex., II, livr. iii, 1-9, pls. i-ii.

This paper forms pages 212-220 of the complete report.

—— 1884 A

Sur la classification des taupes de l'ancien continent.

C. R. Acad. Sci. Paris, XCIX, 1141-1143.

Edwards, J. J. 1902 A

Paleontology of Bartholomew County, Indiana. Mammalian fossils.

Proc. Indiana Acad. Sci., 1901, 247-248.

A brief abstract in Geol. Centralbl., IV, 342.

The identifications of species in this paper are of doubtful correctness.

Edwards, Linden F. 1926 A

The protractile apparatus of the mouth of the catastomid fishes.

Anat. Record, XXXIII, 257-270, 6 figs.

The bibliography presents 15 titles.

Egerton, P. G. 1843 A

On some new species of fossil chimæroid fishes, with remarks on their general affinities.

Proc. Geol. Soc. Lond., IV, 153-157, 211.

—— 1845 A

See Hay, O. P., 1902 A, 85.

Reprinted in Proc. Geol. Soc. Lond., IV, 414-416, pl. iv.

—— 1852 C

Figures and descriptions illustrative of British organic remains.

Mem. Geol. Surv. U. K., decade VI, pls. i-x.

The articles are separately paged and are designated as 6B, 6C, etc., to 6L. They are all devoted to descriptions of fossil fishes.

—— 1853 C

Palichthyologic notes. No. 5. On two new species of placoid fishes from the Coal Measures.

Quart. Jour. Geol. Soc., IX, 280-282, pl. xii.

—— 1854 A

Palichthyologic notes. No. 6. On a fossil fish from the upper beds of the New Red sandstone at Bromsgrove.

Quart. Jour. Geol. Soc., X, 367-371, pl. xi.

—— 1855 A

Figures and descriptions illustrative of British organic remains.

Mem. Geol. Surv. U. K., decade VIII, pls. i-x.

—— 1858 A

Figures and descriptions illustrative of British organic remains.

Mem. Geol. Surv. U. K., decade IX, pls. i-x.

—— 1858 B

On *Chondrosteus,* an extinct genus of fish allied to the Sturionidæ.

Proc. Roy. Soc. Lond., IX, 233.

—— 1873 A

On *Platysiagum sclerocephalum* Egerton and *Palæospinax priscus* Egerton.

Quart. Jour. Geol. Soc., XXIX, 419-421.

—— 1877 A

On some new pycnodonts.

Geol. Mag. (2), IV, 49-55, pls. iii, iv.

Eggeling, H. 1904 A

Zur Morphologie des Manubrium sterni.

Denk. med.-naturw. Ges. Jena, XI (Festschr. 70sten. Geburtst. Ernst Haeckel), 59-114, pl. vi, 43 text-figs.

Eggeling, H.—Continued 1906 A

Clavicula, Præclavium, Halsrippen und Manubrium sterni.

Anat. Anz., XXIX, 99-110, 3 text-figs.

—— 1922 A

Die Gablung der Halswirbeldornen und ihre Ursachen.

Anat. Anz., LV, 33-94, 21 figs.

For bibliography see pages 209-211.

—— 1922 B

Die Halswirbeldornen und deren Muskeln bei Halbaffen.

Anat. Anz., LV, 201-211, 4 figs.

Bibliography on pages 209-211.

Eggert, Bruno 1927 A

Über sexuelle Unterschiede am Schädel der Erdkröte (*Bufo vulgaris* Laur.) und ihr Verhalten bei der experimentell-physiologischen Geschlechtsumstimmung.

Zeitschr. wiss. Zool., CXXIX, 567-588, pl. iv, 13 text-figs.

The bibliography includes 10 titles.

Ehrenberg, K. 1925 A

Die ontogenetische Entwicklung des Höhlenbärenskelettes.

Palaeont. Zeitschr., VII, 48-52.

—— 1926 A

Über Epiphysenbildungen am Hinterhaupte und an den beiden atypischen Halswirbeln des Höhlenbären und anderer Säugetiere.

Palaeont. Zeitschr., VIII, 54-60.

Eichwald, E. 1832 A

Neue Deutung des Kiemendeckels der Fische; nebst vergleichend anatomischen Beobachtungen über das Zungenbein der Wirbelthiere.

Isis von Oken, XXV, 858-897.

—— 1835 A

De pecorum et pachydermorum reliquiis fossilibus, in Lithuania, Volhynia et Podolia repertis Commentatio.

Nova Acta Acad. Leop. Carol., XVII, 675-760, pl. li-lxiv.

—— 1840 B

Geognostiche Uebersicht von Esthland und den Nachbar-Gegenden.

Neues Jahrb. Min. Geogn. Geol., 1840, 421-430.

Eigenmann, Carl H. 1887 A

A review of the American Gasterosteidæ.

Proc. Acad. Nat. Sci. Phila., 1886, 233-252.

—— 1890 B

The evolution of the catfishes.

Zoe, I, 10-15.

Eigenmann, Carl H.—Continued 1894 A

On the viviparous fishes of the Pacific coast of North America.

Bull. U. S. Fish Comm., XII, 1892 (1894), 381-478, pls. xciv-cxviii.

—— 1902 A

The eyes of *Rhineüra floridana.*

Proc. Wash. Acad. Sci., IV, 533-542, fig. 22.

The bibliography includes 9 titles.

—— 1909 A

Cave vertebrates of America.

Publ. Carnegie Instn. Wash. No. 104, vii-ix+1-241 pages, 29 pls., 72 text-figs.

Eimer, G. H. Theodor 1901 A

Vergleichend-anatomisch-Physiologische Untersuchungen über das Skelett der Wirbeltiere.

8vo., i-xi+1-263 pages, 66 text-figs.

Eisler, P. 1895 A

Die Homologie der Extremitaeten.

Abh. naturf. Ges. Halle, XIX, 1-258, pls. x-xii.

On pages 245-258 is a bibliography of 292 titles.

Eldridge, George H. 1896 A

Geology of the Denver Basin, Mesozoic Geology.

Mon. U. S. Geol. Surv., XXVII, 51-150.

Ellenberger, W., and H. **Baum** 1903 A

Handbuch der vergleichenden Anatomie der Haustiere.

Tenth edition. 8vo., i-xvi+1-1004 pages, 565 illustrations in text.

The osteology and odontography occupy pages 12-200.

Elliot, A. I. M. 1907 A

Some facts in the later development of the frog, *Rana temporaria.*

Part I: The segments of the occipital region of the skull.

Quar. Jour. Micr. Sci., Lond., LI, 647-657, pls. xxxix, xl.

Elliot, Daniel G. 1885 A

Natural history of birds. Gallini, Columbæ.

Stand. Nat. Hist., III, 197-259, figs. 94-123.

—— 1901 A

A synopsis of the mammals of North America and the adjacent seas.

Field Columb. Mus. Zoöl. (2), i-xvi+1-522 pages, pls. i-lvi, 94 text-figs.

Pages 473-522, with pls. l-lvi, form a supplement to the Synopsis, which is entitled: A list of the land and sea mammals of North America north of Mexico.

Elliot, Smith G. 1921 A
Living example of *Tarsius.*
Proc. Zool. Soc. Lond., 1921, pt. 1, 184-186, pl. i.

Ells, R. W. 1906 A
Report on the geology of Prince Edward Island.
Rep. Geol. Surv. Canada for 1902-3, xv, A, 369-379.

Elrod, Moses N., and A. C. **Benedict** 1892 A
Geology of Wabash County [Indiana].
Geol. Surv. Ind., xvii, 192-272.

Elwes, H. J. 1903 A
On the present condition and habits of the elk in Norway.
Proc. Zool. Soc. Lond., 1903, i, 133-151, text-figs. 18-26.

Emerson, Benjamin Kendall 1898 A
Geology of Old Hampshire County, Massachusetts, comprising Franklin, Hampshire, and Hampden Counties.
Mon. U. S. Geol. Surv., xxix, i-xix; 1-790, pls. i-xxxv, text-figs. 1-48.
Contains a list of Triassic fishes found in Massachusetts and some remarks on the localities (pages 398-400).

—— 1917 A
Geology of Massachusetts and Rhode Island.
Bull. U. S. Geol. Surv., dxcvii, 1-289, maps and figures.

——, and F. B. **Loomis** 1904 A
On *Stegomus longipes,* a new reptile from the Triassic sandstones of the Connecticut Valley.
Amer. Jour. Sci. (4), xvii, 377-380, pl. xxii.
Abstract in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 169; Geol. Centralbl., vii, 427-428.

Emery, C. 1887 A
Über die Beziehungen des Cheiropterygiums zum Ichthyopterygium.
Zool. Anz., x, 185-189, 5 text-figs.

—— 1890 A
Zur Morphologie des Hand- und Fussskeletts.
Anat. Anz., v, 283-294, 5 text-figs.

—— 1895 A
Études sur la morphologie des membres des amphibiens et sur la phylogénie du chiroptérygium.
Arch. ital. Biol., xxii, 218-232.

Emery, C.—Continued 1897 D
Accessorische und echte Skeletstücke.
Anat. Anz., xiii, 600-602.

—— 1901 A
Hand- und Fussskelet von *Echidna hystrix.*
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—— 1918 A

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Jour. Anat. Physiol. Lond., LII, 211-250, pls. i-xxii, 15 figs.

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Jour. Anat. Physiol. Lond., LII, 412-441, pls. i-xi.

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Monthly Amer. Jour. Geol., I, 140-144.

An explanation in a dispute between the author and Dr. Isaac Hays.

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Anoures fossiles des couches préglaciaires de Puspökfürdö en Hongrie, en considération spéciale du développement phylétique du sacrum chez les anoures.

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Bull. Soc. vaud. Sci. nat., LII, 317-324.

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Quelques observations sur la loi de Dollo et l'epistréphogénèse en considération spéciale de la loi biogénétique de Hæckel.

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Placer deposits of the Manhattan district, Nevada.

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Anat. Anz., LIV, 506-526, 1 pl., 2 text-figs.

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Bemerkungen über die Entwicklung der Wirbelsäule bei den Amphibien; nebst Schilderung eines abnormen Wirbelsegmentes.

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Geology of the coasts of the arctic lands visited by the late British expedition under captain Sir George Nares, R.N., K.C.B., F.R.S.

Quart. Jour. Geol. Soc., XXXIV, 556-567, pl. xxiv.

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Figure of a mounted specimen of *Moropus*.

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Outdoor Life, LXI, Feb., 18-19, 82, 7 figs.

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The antiquity of man in America.

Scient. Monthly, May 1927, 477-479.

Filatoff, D. 1906 A

Zur Frage über die Anlage des Knorpelschädels bei einigen Wirbeltieren.

Anat. Anz., XXIX, 623-633, 8 text-figs.

—— 1907 A

Die Metamerie des Kopfes von *Emys lutaria*.

Morph. Jahrb., XXXVII, 289-396, pls. viii-x, 4 text-figs.

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Des liens qui rattachent la zoologie à la paléontologie.

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The bird's foot.

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The limbs of *Lysorophus*.

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Bau und Entwickelung des Carpus und Tarsus vom *Hyrax*.

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—— 1901 B

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Beiträge zum Durchbruch der bleibenden Zähne und zur Resorption des Milchgebisses.

Anat. Hefte, Arb., XXXVIII, 617-716, pls. li-lxiv, 27 text-figs.

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8vo., i-xlii+1-752 pages.

Under the species are copious synonymical references.

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Zur Kenntnis des Primordialcraniums der Affen.

Anat. Anz., XX, 410-417, 1 fig.

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8vo., vol. III, i-xxiv; 1-732, Mosquæ, 1814.

——— 1829 A
Notice sur quelques animaux fossiles de la Russie.
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An introduction to a paper by Adolf Beecker.

——— 1904 A
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Note sur l'*Halitherium schinzi*.
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Note sur *Prohalicore dubaleni*.
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Quart. Jour. Geol. Soc., xxx, 1-7, pl. 1.

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Note on the occurrence of the remains of *Hyænarctos* in the Red Crag of Suffolk.

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The comparative history of the femur.

Smithson. Misc. Coll., lxi, No. 8, 1-9, pls. i-iii.

—— 1916 A

A contribution to the comparative histology of the femur.

Smithson. Contrib. Knowl., xxxv, No. 3, i-ix+1-242 pages, pls. A-C; i-xxxv.

Edited by Aleš Hrdlička.

—— 1921 A

The circulatory system in bone.

Smithson. Misc. Coll., lxxii, art. 10, 1-72, pls. i-vi.

Forbes, Henry Ogg 1879 A

Shark's teeth.

Nature, xx, 456-457.

—— 1900 A

Catalogue of the lizard-tailed (*Saururæ*), the toothed (*Odontornithes*), and the ostrich-like (*Struthiones*) birds; and of the tinamous (*Tinami*), and the divers (*Colymbi*) in the Derby Museum.

Bull. Liverpool Mus., iii, 25-34.

A few fossil birds from North America are mentioned by name only.

Forbes, W. A. 1879 A

The glacial period and geographical distribution.

Nature, xix, 363-364.

—— 1880 A

On *Antilocapra americana*.

Proc. Zool. Soc. Lond., 1880, 540-543, 3 figs.

In his "Collected Scientific Papers," 1885, 127-131, 3 figs.

—— 1881 A

On the contributions to the anatomy and classification of birds made by the late Prof. Garrod, F.R.S.

Ibis, 1881, 1-32, 9 figs.

In Forbes' "Collected Scientific Papers," 1885, 189-213, figs. 1-9.

—— 1881 B

On the anatomy and classification of the petrels, based upon those collected by H. M. S. *Challenger*.

Rep. Brit. Assoc. Adv. Sci., 1881, 671.

In Forbes' "Collected Scientific Papers," 1885, 284.

—— 1882 A

On the variations from the normal structure of the foot in birds.

Ibis (4), vi, 386-390, 2 text-figs.

—— 1882 B

The claw on the "index" finger of the Cathartidæ.

Amer. Naturalist, xvi, 141-142.

—— 1882 C

On the rudimentary hallus of birds.

Proc. Zool. Soc. Lond., 1882, 548-549.

In Forbes' "Collected Scientific Papers," 359-360.

—— 1882 D

Report on the anatomy of the petrels (*Tubinares*) collected during the voyage of H. M. S. *Challenger*.

Chall. Rep. Zool., iv, pt. xi, 1-64, pls. i-vii.

In Forbes' "Collected Scientific Papers," 1885, 363-440, pls. xii-xxiv.

Forbes, W. A.—Continued 1882 E
On the variation from the normal structure of the foot in birds.
Ibis., 1882, 386-390, 2 figs.
In Forbes' "Collected Scientific Papers," 1885, 440-443.

Ford, John 1878 A
On a stone ax [and bone of *Canis*].
Proc. Acad. Nat. Sci. Phila., 1877 (1878), 305-306.

—— 1879 A
The leather turtle.
Amer. Naturalist, XIII, 633-637.

Forster, Andreas 1901 A
Beiträge zur Kenntniss der Entwicklungsgeschichte des Interparietale.
Zeitschr. Morphol., Anthrop., IV, 99-148, 6 pls., 45 text-figs.

—— 1905 A
Skeletsystem. Extremitätenskelet.
Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 89-138.
On pages 89-97 is a list of 177 titles of papers on the subject.

Fossa-Mancini, E. 1921 A
Alcune considerazioni sulla dietologia degli *Ptychodus*.
Atti Soc. Toscano Sci. Nat., XXXIII, 194-213.
There is a bibliography of 35 titles.

Foster, J. W. 1838 B
Review, unsigned, of W. W. Mather: First Annual Report on Geological Survey of Ohio.
Amer. Jour. Sci. (1), XXXIV, 347-362.
The internal evidence appears to show that this review was written by the assistant geologist, J. W. Foster.

—— 1838 C
Unsigned letter to editor on the jaw and teeth of "*Elephas jacksoni*," found in Ohio.
Amer. Jour. Sci. (1), XXXIV, 362-364, 3 figs.
Credited in Hay, O. P., 1902 A, 164, to W. W. Mather. It was quite certainly written by J. W. Foster.

—— 1839 A
Head of the *Mastodon giganteus*.
Amer. Jour. Sci. (1), XXXVI, 189-191, 2 figs.
Presents also figure of the type tooth of *Elephas jacksoni*.

—— 1851 A
On fossil fish in the coal rocks of Ohio.
Amer. Jour. Sci. (2), XII, 282-283.
No genera or species mentioned.

Foster, J. W.—Continued 1857 A
See Hay, O. P., 1902 A, 91.
Summary in Edinb. New Philos. Jour. (n.s.), V, 361-362.

—— 1869 A
On the antiquity of man in North America.
Trans. Chicago Acad. Sci., I, 227-257.

—— 1873 A
Pre-historic races of the United States of America.
8vo., i-xv+1-415 pages, 72 illustrations.

Fowke, Gerard 1902 A
Archæological history of Ohio: The mound builders and later Indians.
Published by the Ohio State Archæological and Historical Society, i-xvi+1-760 pages, 303 illustrations.

Fowler, Henry W. 1911 A
A description of the fossil fish remains of the Cretaceous, Eocene and Miocene formations of New Jersey.
Bull. Geol. Surv. New Jersey, IV, i-vi, 22-182, 108 figures and groups of figures.
Abstracts in Geol. Centralbl., XVIII, 379; Rev. crit. Paléozool., XVII, 80.

Fraas, E. 1889 B
Kopfstacheln von *Hybodus* und *Acrodus*, sog. *Ceratodus heteromorphus* Ag.
Jahresh. Ver. Naturk. Württemb., XLV, 233-240, pl. v, figs. 9-13.

—— 1895 A
Ein Fund von Skeletresten von *Hybodus* (*Hybodus hauffianus* E. Fraas).
Ber. oberrhein. geol. Ver., Badenweiler, XXVIII, 24-26, 1 fig.

—— 1900 A
Ueber die Markhöhle im Humerus von Elephas.
Corresp.-Bl. deutsch. Ges. Anthrop., XXXI, 38, 1 text-fig.

—— 1901 A
On the aqueous *vs.* aeolian deposition of the White River Oligocene of South Dakota.
Science (n.s.), XIV, 210-212.

—— 1901 B
Die fossilen Krokodile des weissen Jura.
Jahresh. Ver. Naturk., Württemb., LVII, CXXVI.

Fraas, E.—Continued 1901 C

Die Meerkrokodile (*Thalattosuchia* n. g.), eine neue Sauriergruppe der Juraformation.

Jahresh. Ver. Naturk., Württemb., LVII, 409-418.

Abstract in Geol. Centralbl., II, 510.

—— 1901 D

Labyrinthodon aus dem Buntsandstein von Teinach.

Jahresh. Ver. Naturk., Württemb., LVII, 318-320, 1 fig.

—— 1902 A

Wild-West, Reiseerinnerungen eines Geologen an die amerikanischen Felsengebinge und Prairien.

Die Gartenlaube, Feb. 4, 1902, 76-80, 4 illustrations.

A popular account of the author's journey.

—— 1902 B

Die Meer-krokodilier (*Thalattosuchia*) des oberen Jura unter specieller Berucksichtigung von *Dacosaurus* and *Geosaurus*.

Palæontogr., XLIX, 1-72, pls. i-viii, 7 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 98-101.

—— 1902 C

Geologische Streifzüge durch die Prärien und Felsengebirge Nordamerikas.

Jahresh. Ver. Naturk., Württemb., LVIII, lxv-lxviii.

—— 1903 A

Thalassemys marina E. Fraas aus dem oberen weissen Jura von Schnaitheim nebst Bemerkungen über die Stammesgeschichte der Schildkröten.

Jahresh. Ver. Naturk., Württemb., LIX, 72-104, pls. i-iii, 3 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 173-174.

—— 1904 A

Neue Zeuglodonten aus dem unteren Mitteleocän vom Mokattam bei Cairo.

Geol. Pal. Abh. Jena, X, [(2), vi], 1-24, pls. i-iii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, I, Ref., 486-492; Geol. Centralbl., V, 374; Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 185-186; Jour. Geol. XVII, 183.

—— 1904 B

Weitere Beiträge zur Fauna des Jura von Nordost-Grönland.

Meddelelser om Grönland, XXIX, pt. 8, 277-285, 4 text-figs.

Briefly noted by R. Lydekker in Knowl. and Scient. News, II, 230.

Fraas, E.—Continued 1904 C

Vergleichung der amerikanischen und europaischen Juraformation.

Internat. Amerikanisten-Kongr., Stuttgart, 1904, Tag. XIV, 41-45.

—— 1905 A

Zur Stammesgeschichte der Waltiere.

Jahresh. Ver. Naturk., Württemb., LXI, lxiii.

—— 1905 B

Reptilien und Säugetiere in ihren Anpassungserscheinungen an das marine Leben.

Jahresh. Ver. Naturk., Württemb., LXI, 347-386, 5 text-figs.

Résumé in Ann. Soc. Zool. Belgique, XL, Bull., xcvii-cxvi.

Abstracts in Rev. crit. Paléozool., XII, 131, 269; Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 155.

—— 1907 A

Säge von *Propristis schweinfurthi* Dames aus dem oberen Eocan von Agypten.

Neues Jahrb. Min. Geol. Pal., 1907, I, 1-6, pl. i.

Abstracts in Geol. Centralbl., X, 330; Sci. Progress, II, 523.

—— 1907 B

Aëtosaurus crassicauda n. sp., nebst Beobachtungen über das Becken der Aëtosaurier.

Jahresh. Ver. Naturk., Württemb., LXIII, 101-109, pls. i, ii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1908, II, Ref., 436-437; Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 168; Sci. Progress, II, 515.

—— 1908 A

Ostafrikanische dinosaurier.

Palaeontogr., LV, 105-144, pls. viii-xii, 6 text-figs.

Abstract in Nature, LXXIX, 166.

—— 1910 A

Plesiosaurier aus dem oberen Lias von Holzmaden.

Palaeontogr., LVII, 105-140, pls. vi-x, 11 text-figs.

See Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 139-141, for an abstract.

—— 1910 B

Alte und neue Dinosaurier-Funde.

Jahresh. Ver. Naturk. Württemb., LXVI, xciii-xciv.

Fraas, E.—Continued 1911 A

Embryonaler *Ichthyosaurus* mit Hautbekleidung.

Jahresh. Ver. Naturk., Württemb., LXVII, 480-487, 5 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 477; Geol. Centralbl., XVIII, 46; Nature, LXXXVII, 197, 4 figs.

—— 1911 B

Die ostafrikanische Dinosaurier.

Verh. Ges. deutsch. Naturf., LXXXIII, pt. i, 27-41.

—— 1912 A

The hugest mammoth ever exhumed.

Scient. Amer. Suppl., LXXIII, 325.

—— 1913 A

Neue Labyrinthodonten aus der schwäbischen Trias.

Palaeontogr., LX, 275-294, pls. xvi-xxii, 5 text-figs.

—— 1913 B

Proterochersis, eine pleurodire Schildkkröte aus dem Keuper.

Jahresh. Ver. Naturk., Württemb., LXIX, 13-30, pls. iii, iv, 9 text-figs.

This paper forms No. 80 of the Mitt. Nat. Kab. Stuttgart.

Abstract in Neues Jahrb. Min. Geol. Pal., 1913, II, Ref., 166.

—— 1913 C

Ein unverdrückter *Ichthyosaurus*-Schädel.

Jahresh. Ver. Naturk., Württemb., LXIX, 1-12, pls. i, ii.

Abstract in Neues Jahrb. Min. Geol. Pal., 1913, II, Ref., 165-166.

—— 1913 D

Über das Massensterben unter den Tieren und dessen Bedeutung für die Paläontologie.

Jahresh. Ver. Naturk., Württemb., LXIX, lxii-lxv.

Fraas, Oscar 1854 A

Squatina acanthoderma. Der Meerengel von Nusplingen.

Zeitschr. deutsch. Geol. Ges., VI, 782-799, pls. xxvii-xxix.

Fraipont, Charles 1912 A

Sur les ostracophores belges. (Réponse à M. M. Leriche.)

Bull. Soc. Belge Geol., XXVI, Proc.-verb., 66-69.

—— 1922 A

Observations sur les grands félidés pléistocènes.

Bull. Acad. Sci. Belgique (5), VIII, 577-580.

Fraser, C. McLean 1915 A

Ichthyological notes on the diagnosis of fish by means of scales and on *Mallotus villosus*.

Trans. Roy. Canad. Inst. XI, 109-118, pl. x.

Frassetto, Fabio 1903 A

Notes de craniologie comparée.

Ann. Sci. nat. (8), XVII, 143-363, pls. iii-xxii, 53 text-figs.

—— 1915 A

Lo scheletro degli arti nell' uomo e nei vertebrati. Filogenesi ed ontogenesi.

Bologna, 1915, Libreria editrice Licinio Cappelli, 1-163 pages, 95 text-figs.

Frech, Fritz 1897 A

Lethæa geognostica, I Theil. Lethæa palæozoica, 2. Bd. 1 Lief, 1-256, 13 tables, 3 maps, 31 figs., Stuttgart, 1897.

—— 1906 A

Über die Gründe des Aussterbens der vorzeitlichen Tierwelt.

Arch. Rassenbiol., III, 4th Heft, 469-498.

For abstract see Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 292-293.

—— 1907 A

Ueber die Klima-Aenderungen der geologischen Vergangenheit.

C. R. Congr. internat. geol., Mexico, 1906, X, 299-325.

—— 1919 A

Die Fährten von *Chirotherium*.

Neues Jahrb. Min. Geol. Pal., 1919, L, 109.

Abstract of a dissertation by Karl Willruth Halle (Saale), 1917, 48 pages, 4 pls.

——, and **Geinitz** (Eugen) 1903 A

Die Flora und Fauna des Quartärs.

Lethæa geognostica. Handb. d. Erdgeschichte. Edited by F. Frech, III Theil, II Bd, I Abth., 1-41, 12 pls., many text-figs.

Freeman, O. W. 1926 A

Mammoth bones found in loess of Washington.

Science (n.s.), LXIV, 477.

Frets, G. P. 1909 A

Ueber die Varietäten der Wirbelsäule und ihre Erblichkeit.

Anat. Anz. Ergänzungsh., XXXIV, 105-120, 4 text-figs.

Frets, G. P.—Continued 1910 A

Études sur les variétés de la colonne vertébrale.

Morphol. Jahrb., XLI, 558-576, pls. x, xi, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 100-101.

—— 1912 A

Beiträge zur vergleichenden Anatomie und Ontogonie der Nase der Primaten. I: Nase bei einigen catarrhinen Affen, Säugern und dem Menschen.

Morphol. Jahrb., XLIV, 409-463, 64 text-figs.

In the bibliography are 33 titles.

—— 1913 A

Beiträge zur vergleichenden Anatomie und Embryologie der Nase der Primaten. II: Die Regio ethmoidalis des Primordialcraniums mit Deckknochen von einigen platyrrhinen Affen.

Morphol. Jahrb., XLV, 557-726, pls. xviii-xx, 113 text-figs.

Freudenberg, Wilhelm 1910 A

Die Säugetierfauna des Pliocäns und Postpliocäns von Mexiko. I: Carnivoren.

Geol. Pal. Abh. Jena, IX (XIII), Heft 3, pls. i-ix, text-figs. 1-5; in complete volume, 193-231, pls. xx-xxviii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 311-312; Geol. Centralbl., XV, 721-722; Rev. crit. Paléozool., XV, 79; Sci. Progress, V, 667.

—— 1911 A

Abstract of J. C. Merriam: Skull and dentition of an extinct cat closely allied to *Felis atrox* Leidy (Merriam, J. C., 1909 A).

Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 134.

—— 1913 A

Elephas primigenius fraasi Dietrich und die schwäbische Hochterrasse.

Centralbl. Min. Geol. Pal., 1913, 475-480; 646-652.

—— 1914 A

A. Lotichius: Der Säbeltiger.

Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 501.

Review of paper by Lotichius (Lotichius, A., 1914 A.).

—— 1921 A

Geologie von Mexico.

8vo., i-viii+1-232 pages, 2 pls., 28 text-figs., 1921, Berlin, Borntraeger.

Freudenberg, Wilhelm—Cont'd 1922 A

Die Säugetierfauna des Pliocäns und Postpliocäns von Mexico. II Teil: Mastodonten und Elephanten.

Geol. Pal. Abh. Jena, XIV (XVIII), Heft 3, 1-76, pls. i-ix, text-figs. 1-28.

The literature is cited in foot-notes.

—— 1923 A

Plastische Rekonstruktion des Urmenschen von Heidelberg (*Homo heidelbergensis*).

Verh. Anat. Ges., XXXII, 122-129, 2 figs.

Followed by a discussion by Fischer, Stieve, Bluntchli, Weidenreich, Grosser, Lubosch, Aichel, Maurer.

—— 1926 A

Über *Elephas trogontherii* Pohl.

Palaeont. Zeitschr., VIII, 68-69.

Freund, L. 1902 A

Bemerkungen über den Bau der Mittelhand.

Verh. Ges. deutsch. Naturf., 74ste Vers., 2ter. Teil., 1stes Heft, 162-164.

—— 1904 A

Die Osteologie der Halicoreflosse.

Zeitschr. wiss. Zool., LXXVII, 363-397, pls. xiv, xv, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 116-117.

—— 1905 A

Das Sternum von *Halicore dugong*.

Zeitschr. Morphol. Anthrop., VIII, 425-438, pls. xxviii, xxix, 1 text-fig.

—— 1906 A

Die Hyperdaktylie.

Zeitschr. Tiermedizin, X, 110-117.

—— 1908 A

Beiträge zur Entwickelungsgeschichte des Schädels von *Halicore dugong* Erxl.

Semon's "Zool. Forschungsreisen," IV, Lfg. 4 (Denk. med. Ges. Jena, VII), 557-626, 50 text-figs.

Appended is a bibliography of 21 titles.

—— 1911 A

Zur Morphologie des harten Gaumens der Säugetiere.

Zeitschr. Morphol. Anthrop., XIII, 377-394, pl. xiv, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 37.

—— 1912 A

Zur Morphologie des harten Gaumens der Säugetiere.

Verh. internat. Zool.-Kongr., Graz, VIII, 1910, 557-558, 1 text-fig.

—— 1913 A

Neues über Sirenen.

Naturwiss. Berlin, I, 258-261, 2 figs.

Freund, L.—Continued 1914 A

Beiträge zur Entwicklungsgeschichte der Sirenen.

Morphol. Jahrb., XLIX, 353-388, pl. XVI, 22 text-figs.

—— 1914 B

Neues über die Skelettentwicklung bei den Sirenen.

Verh. Ges. deutsch. Naturf., LXXXV, Wien, 1913, Th. 2, Häfte 1, 706.

Freund, Paul 1892 A

Beiträge zur Entwicklungsgeschichte der Zahnanlagen bei Nagethieren.

Arch. mikr. Anat. Bonn., XXXIX, 525-555, pls. XXII, XXIII.

—— 1893 A

Contributions to the development of the tooth-rudiments in rodents.

Ann. Mag. Nat. Hist. (6), XI, 301-327.

Citation of the literature in foot-notes.

Frey, Hugo 1911 A

Vergleichend-anatomische Studien über die Hammer-Amboss-Verbindung der Säuger.

Anat. Hefte Arb., XLIV, 363-437, pls. XIV XXIV.

There is a bibliography of 26 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 38-40.

Frick, Childs 1918 A

Fauna of the Bautista badlands.

Bull. Geol. Soc. Amer., XXIX, 163 (abstract).

—— 1921 A

Extinct vertebrate faunas of the badlands of Bautista Creek and San Timoteo Cañon, southern California.

Bull. Dept. Geol. Univ. Calif., XII, 277-424, pls. XLIII-L, 165 text-figs.

Abstracts in Rev. crit. Paléozool., XXVI, 134; Geol. Zentralbl., XXIX, 443-444.

—— 1926 A

The Hemicyoninæ and an American Tertiary bear.

Bull. Amer. Mus. Nat. Hist., LVI, 1-119, frontispiece, 3 tables, 62 text-figs.

Throughout this paper are numerous citations of the literature.

—— 1926 B

Tooth sequence in certain trilophodont tetrabelodont mastodons and *Trilophodon* (*Serridentinus*) *pojoaquensis*, new species.

Bull. Amer. Mus. Nat. Hist., LVI, 122-176, 27 figs.

—— 1926 C

Prehistoric evidence.

Nat. Hist., XXVI, 440-448, 3 figs.

Friedmann, Emil 1897 A

Beiträge zur Zahnentwicklung der Knochenfische.

Morphol. Arbeit., VII, 546-582, 16 text-figs.

There is presented a bibliography of 32 titles.

Fries, B. Fr. 1838 A

Ichthyologische Beiträge zur skandinavischen Fauna. Das Geschlecht *Syngnathus*.

Arch. Naturges., IV, 1, 237-250, pl. VI.

—— 1838 B

Metamorphose, bemerkt bei der kleinen Meernadel (*Syngnathus lumbriciformis*).

Arch. Naturges., IV, 1, 251-256, pl. VI.

Fries, C. 1924 A

Zur Phylogenie des Schildkrötenpanzers.

Zool. Anz., LXI, 277-280.

Fritsch, A. 1879 A

Review of Gaudry's "Sur les reptiles des temps primaires" (Gaudry A., 1878 A).

Neues Jahrb. Min. Geol. Pal., 1879, 720.

—— 1889 B

Abstract in Geol. Mag. (3), V, 523; (3), VIII, 375-378, 2 figs.

—— 1895 A

Abstract in Geol. Mag. (4), II, 40; (4), III, 83.

Froriep, August 1883 A

Zur Entwickelungsgeschichte der Wirbelsäule, insbesondere des Atlas und Epistropheus und der Occipitalregion. I: Beobachtung an Hühnerembryonen.

Arch. Anat. Entwickl., 1883, 177-234, pls. VII-IX; text-figs. 1-8.

There is a bibliography of 27 titles.

—— 1886 A

Zur Entwickelungsgeschichte der Wirbelsäule, insbesondere des Atlas und Epistropheus und der Occipitalregion. II: Beobachtung an Säugerthiere-embryonen.

Arch. Anat. Entwickl., 1886, 69-150, pls. I-III, 8 text-figs.

The bibliography includes 19 titles.

—— 1887 A

Bemerkungen zur Frage nach der Wirbeltheorie des Kopfskelettes.

Anat. Anz., II, 815-835.

Froriep, August—Continued 1902 A

Zur Entwickelungsgeschichte des Wirbeltierkopfes.

Verh. Anat. Ges., XV, Bonn, 34-46, 5 text-figs.

—— 1905 A

Sur la genèse de la partie occipitale du crâne.

C. R. Assoc. Anatomistes, VII, 156-157.

—— 1905 B

Die occipitalen Urwirbel der Amnioten im Vergleich mitt denen der Selachier.

Verh. Anat. Ges., XIX, Genf, 111-120, 4 text-figs.

Frost, Frederick H. 1927 A

Statistical identification as applied to *Parapavo.*

Bull. Dept. Geol. Univ. Calif., XVII, 57-62.

Frost, George Allan 1913 A

The internal cranial elements and foramina of *Dapedius granulatus,* from a specimen recently found in the Lias at Charmouth.

Quart. Jour. Geol. Soc., LXIX, 219-222, 2 text-figs.

For review see Geol. Mag. (5), X, 234.

—— 1925 A

A comparative study of the otoliths of the neopterygian fishes.

Ann. Mag. Nat. Hist. (9), XV, 152-163, 553-561, pls. xi-xiii, xxix.

—— 1926 A

A comparative study of the otoliths of the neopterygian fishes (continued). Orders Haplomi, Heteromi, Incomi, Hypostomides, Salmopercæ, Synentognathi, Microcyprini, Solenichthyes, Anacanthini.

Ann. Mag. Nat. Hist. (9), XVIII, 465-490, pls. xx-xxii.

—— 1927 A

A comparative study of the otoliths of the neopterygian fishes (continued). Orders Allotriognathi, Berycomorphi.

Ann. Mag. Nat. Hist. (9), XIX, 439-445, pl. viii.

Fry, Edward 1850 A

Remarks on the morphology of the vertebrate skeleton.

Proc. Zool. Soc. Lond., XVIII, 15-22.

Fryd, Carlos 1901 A

Die Otolithen der Fische in Bezug auf ihre Bedeutung für Systematik und Altersbestimmung.

Christ.-Albr.-Univ., Kiel. Inaug. Dissert., 1-54, 16 text-figs.

Fryxell, F. M. 1926 A

A horn of the prong-horn antelope (*Antilocapra americana*) found at Moline, Illinois.

Jour. Mamm., VII, 333-334.

Fuchs, Hugo 1905 A

Spezielle Anatomie und Entwicklungsgeschichte des Menschen und der Wirbeltiere. IV: Skeletsystem. A. Kopfskelet.

Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 33-91.

Pages 33-39 are occupied by a bibliography of the recent literature of the subject. The remainder of the paper consists of abstracts of the papers listed.

—— 1905 B

Bemerkungen über die Herkunft und Entwickelung der Gehörknöchelchen bei Kaninchen-Embryonen (nebst Bemerkungen über die Entwickelung des Knörpelskeletes der beiden ersten Visceralbogen).

Arch. Anat. Entwickl., 1905, 1-178, pls. i-iv.

References to other authors in foot-notes.

—— 1906 A

Untersuchungen über die Entwickelung der Gehörknöchelchen des Squamosums und des Kiefergelenkes der Säugertiere, nebst einigen vergleichend-anatomischen Betrachtungen über Articulare, Quadratum und Gehörknöchelchen.

Arch. Anat. Physiol. Leipzig, Supplem. Bd., 1906, 1-89, pls. i-vi, 4 text-figs.

For "Nachtrag" see Archiv, 1906, 117-118; also Anat. Anz., XXVIII, 317-318.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 46-50.

—— 1907 A

Über die morphologische Bedeutung des Squamosums am Säugetierschädel.

Zeitschr. Morphol. Anthrop., X, 147-170, pl. xi, 2 text-figs.

References are made to works of other authors.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 50-51.

—— 1907 B

Untersuchungen über Ontogenie und Phylogenie der Gaumenbildungen bei den Wirbeltieren. I: Über den Gaumen der Schildkröten und seine Entwickelungsgeschichte.

Zeitschr. Morphol. Anthrop., X, 409-463, pls. xx, xxi, 8 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 49-51.

Fuchs, Hugo—Continued 1907 C

Ueber die Entwickelung des Operculums der Urodelen und des Distelidiums (''Columella'' auris) einiger Reptilien.

Anat. Anz. Ergänsungsh., xxx, 8-34, pls. i, ii, 5 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xiii, pt. 3, 48.

—— 1907 D

Ueber das Hyobranchialskelett von *Emys lutaria* und seine Entwickelung.

Anat. Anz., xxxi, 33-39, 5 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xiii, pt. 3, 48.

—— 1908 A

Ueber das Vorkommen selbständiger knöcherner Epiphysen bei Sauropsiden.

Anat. Anz., xxxii, 352-360, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xiv, pt. 3, 120.

—— 1908 B

Ueber einen Rest des Parasphenoids bei einem rezenten Säugetiere.

Anat. Anz., xxxii, 584-590, 3 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xiv, pt. 3, 50.

—— 1908 C

Untersuchungen über Ontogenie und Phylogenie der Gaumenbildungen bei den Wirbeltieren. II: Über das Munddach der Rhynchocephalen, Saurier, Schlangen, Krokodile und Säuger und den Zusammenhang zwischen Mund- und Nasenhöhle bei diesen Tieren.

Zeitschr. Morphol., Anthrop., xi, 153-248, pls. vi-viii, 23 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xiv, pt. 3, 47-50.

—— 1909 A

Ueber die morphologische Bedeutung der Sacralrippen.

Anat. Anz., xxxiv, 349-356, 526, 2 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xv, pt. 3, 104-108.

—— 1909 B

Betrachtungen über die Schläfengegend am Schädel der Quadrupeda.

Anat. Anz., xxxv, 113-167, 25 text-figs.

—— 1909 C

Ueber die Entwickelung einiger Deckknochen (Vomer, Pterygoid, Maxillare) bei Säugetieren (und ihr Verhältnis zum Knorpelskelette).

Anat. Anz. Ergänzungsh., xxxiv, 85-104, pl. i, 12 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xv, pt. 3, 45-49.

Fuchs, Hugo—Continued 1909 D

Beiträge zur Entwickelungsgeschichte und vergleichenden Anatomie des Brustschulterapparates der Wirbeltiere.

Zeitschr. Morphol. Anthrop., ii, 141-226, pls. vi-ix, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xviii, pt. 3, 166-168.

—— 1910 A

Ueber das Pterygoid, Palatinum und Parasphenoid der Quadrupeden, insbesondere der Reptilien und Säugetiere, nebst einigen Betrachtungen über die Beziehungen zwischen Nerven und Skeletteilen.

Anat. Anz., xxxvi, 33-95, 45 text-figs.

For a reply to this paper see Gaupp, E., 1910 B.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xvi, pt. 3, 40-41.

—— 1910 B

Bemerkungen über Monimostylie und Streptostylie. Einige berichtigende Bemerkungen zu der Versluys-schen Arbeit: ''Streptostylie bei Dinosauriern, etc.''

Anat. Anz., xxxvii, 250-256.

See Versluys, 1911 A, for rejoinder.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xvi, pt. 3, 41.

—— 1910 C

Ueber die Homologie der Paukenhöhlen und das Verhältnis zwischen Nervenverlauf und Skelett. Erwiderung auf die Arbeit des Herrn Dr. O. Bender: ''Nochmals die Homologie der Paukenhöhlen'' (Anat. Anz., Bd. 37, 1910, No. 4/5).

Anat. Anz., xxxvii, 473-496.

—— 1911 A

Ueber das Septomaxillare eines rezenten Säugetieres (*Dasypus*), nebst einigen vergleichend-anatomischen Bemerkungen über das Septomaxillare und Praemaxillare der Amnioten überhaupt.

Anat. Anz., xxxviii, 33-55, 16 text-figs.

For a review see Naturw. Wochenschrift, xxvi, 1911, 433; Jahresber. Anat. Entwickl. (N.F.), xv, pt. 3, 40; Nature, lxxxvii, 197.

Fuchs, Hugo—Continued 1911 B

Über die Beziehungen zwischen den Theromorphen Cope's bezw. den Therapsiden Broom's und den Säugetieren, erörtert auf Grund der Schädelverhältnisse (nebst einem weiteren Beitrag zur Frage der Homologie des Kiefergelenkes und der morphologischen Bedeutung des Squamosums).

Zeitschr. Morphol. Anthrop., XIV, 367-438, 65 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 442; Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 43.

—— 1911 C

Bemerkungen über das Munddach der Amnioten, insbesondere der Schildkröten und Schlangen.

Anat. Anz., XXXVIII, 609-637, 52 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 41-42.

—— 1911 D

Über correlative Beziehungen zwischen Zungen und Gaumenentwickelung der Säugerembryonen, nebst Betrachtungen über Erscheinungsformen progressiver und regressiver Entwickelung.

Zeitschr. Morphol., Anthrop., XIII, 97-130, 30 text-figs.

—— 1912 A

Ueber die Struktur des Reptiliengebisses und die Beziehung desselben zum Säugergebiss.

Anat. Anz. Ergänzungsh., XLI, 68.

—— 1912 B

Ueber einige Ergebnisse meiner Untersuchungen über die Entwickelung des Kopfskelettes von *Chelone imbricata* (Material Voeltskow).

Anat. Anz. Ergänzungsh., XLI, 81-106, 18 text-figs.

Followed by a list of 24 titles of papers pertaining to the subject discussed.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 52-55.

—— 1912 C

Bemerkungen über das Gebiss des *Erinaceus europæus*, gegründet auf das Fehlen eines unteren Incisivus.

Zeitschr. Morphol., Anthrop., XIV, 507-526, 4 text-figs.

Fuchs, Hugo—Continued 1912 D

Über Knorpelbildung in Deckknochen, nebst Untersuchungen und Betrachtungen über Gehörknöchelchen, Kiefer und Kiefergelenk der Wirbeltiere.

Arch. Anat. Entwickl., 1-256, pls. i-iv, 57 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 49-59.

—— 1913 A

Zur Richtigstellung. Erwiderung an Herrn Dr. O. Bender in München, in Sachen der Columella und Bicolumella auris.

Anat. Anz., XLIII, 59-64, 284-286.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 61.

—— 1913 B

Zur Antwort O. Benders.

Anat. Anz., XLIV, 301-303.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 61.

—— 1914 A

Zur Entwickelungsgeschichte der Zahnform und deren Anwendung auf das Primatengebiss.

Deutsche Monatsschr. Zahnheilk., XXXII, 24-44.

—— 1915 A

Structure and development of the skull of *Chelone imbricata*.

4to., Stuttgart, 325 pages. In German (Not seen).

—— 1920 A

Über die Verknöcherung des Innenskeletes am Schädel der Seeschildkröten, nebst Bemerkungen über das geschlossene Schläfendach.

Anat. Anz., LII, 353-389, 449-479, 24 figs.

—— 1920 B

Über die Verknöcherung der Innenskeletts am Schädel der Seeschildkröten, nebst Bemerkungen über das geschlossene Schläfendach (Fortsetzung).

Anat. Anz., LIII, 1-36; 353-371.

The bibliography presents 56 titles.

—— 1920 C

Die Homologie der Wirbeltiere.

Verh. Anat. Ges., XXIX, 92-94 (Discussion).

Fuchs, Hugo—Continued 1922 A

Beiträge zur Entwickelungsgeschichte und vergleichenden Anatomie des Brustschulterapparates der Wirbeltiere; Schultergürtel der Anura

Zeitschr. Morphol. Anthrop., XXII, 283-328, pls. i, ii, 3 text-figs.

The bibliography is found on pages 326-327.

—— 1926 A

Beiträge zur Entwickelungsgeschichte und vergleichende Anatomie des Brust-Schultergürtels der Wirbeltiere.

Verh. Anat. Ges., XXXV, 119-138, 6 figs.

In the bibliography are 14 titles.

—— 1926 B

Beiträge zur Entwickelungsgeschichte und vergleichenden Anatomie des Brustschultergürtels der Wirbeltiere. Fünfte Mitteilung.

Anat. Anz., LXI, 1-34, 4 figs.

Fuchs, Theodor 1900 A

Über die Natur der Edestiden, mit besonderer Rücksicht auf die Gattung *Helicoprion.*

Sitz.-Ber. Akad. Wiss. Wien., CIX, Abth. i, 5-9, 1 plate, 3 text-figs.

Abstracts in Geol. Centralbl., II, 315; Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 132; Rev. crit. Paléozool., V, 69.

—— 1901 A

Ueber *Dæmonhelix krameri* Ammon.

Verhandl. geol. Reichsanst., 1901, 171-172.

Fürbringer, Karl 1903 A

Beiträge zur Kenntnis des Visceralskelets der Selachier.

Morphol. Jahrb., XXXI, 360-445, pls. xvi-xviii.

Appended is a bibliography of 65 titles.

—— 1904 A

Notiz über einige Beobachtungen am Dipnoerkopf.

Anat. Anz., XXIV, 405-408.

Abstract in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 58-59.

—— 1904 B

Beiträge zur Morphologie des Skelettes der Dipnoer, nebst Bemerkungen über Pleuracanthiden, Holocephalen, und Squaliden.

Denk. med.-naturw. Ges. Jena, IV, 423-510, pls. xxxvii-xli, 38 text-figs. (=Semon's "Zool. Forschungsr. in Austral.," vol. I, 423-510).

The bibliography comprises 85 titles.

Abstract in Jahresb. Anat., Entwickl. (N.F.), X, Abt. 3, 97-98.

Fürbringer, Max 1902 A

Morphologische Streitfragen. II: Rabl's Methode und Behandlung der Extremitätenfrage.

Morphol. Jahrb., XXX, 144-274.

Appended is a list of 297 titles of papers on the subject treated.

—— 1902 B

Zur vergleichenden Anatomie des Brustschulterapparates und der Schultermuskeln.

Jena. Zeitschr. Naturwiss., XXXVI, 289-736q, pls. xviii-xxii, text-figs. 180-262.

This paper deals principally with the anatomy of the muscles and nerves of birds. On pages 597-599 are cited treatises which deal more especially with the osteology of birds.

—— 1903 A

Notiz über oberflächliche Knorpelelemente im Kiemenskelet der Rochen (Extraseptalia), zugleich nach von J. Ed. Stumpff gemachten Beobachtungen.

Morphol. Jahrb., XXXI, 623-627, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 59.

—— 1904 A

Zur Frage der Abstammung der Säugetiere.

Denk. med.-naturw. Ges. Jena, XI, Festschr. 70sten. Geburtstst. Ernst Haeckel, 571-604.

Abstract in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 59-61.

—— 1905 A

Die Homologie des Unterkiefers in der Wirbeltierreihe.

Anat. Anz. Ergänzungsh., XXVII, 17.

Brief remarks in discussion.

Fuller, M. L. 1912 A

The New Madrid earthquake.

Bull. U. S. Geol. Surv., CCCCXCIV, 1-119, pls. i-x, 18 text-figs.

——, and F. G. **Clapp** 1912 A

The underground waters of southwestern Ohio.

U. S. Geol. Surv. Water-supp. Pap. 259, 1-228, pls. and figs.

Fulton, A. R. 1883 A

Elephas americanus.

Howe's Annals of Iowa, II, 102-105.

Describes a tooth of a mastodon.

Fulton, T. Wemyss 1906 A

Observations on the otoliths of some teleostean fishes.

Rep. Fish. Board Scotland, XXIV, pt. iii, 48-82, pls. i-v.

References are made to 5 papers which treat the subject.

Funccius, Theodor 1909 A

I: Der Prothorax der Vögel und Säuger.

Morphol. Jahrb., XXXIX, 370-445, pls. xxi-xxiii, 20 text-figs.

This paper is preceded by an introduction by Dr. A. Fleischmann and followed by a bibliography of 41 titles.

Furlong, E. L. 1904 A

An account of the preliminary excavations in a recently explored Quaternary cave in Shasta County, California.

Science (n.s.), XX, 53-55.

Abstract in Geol. Centralbl., VII, 618.

—— 1905 A

Preptoceras, a new ungulate from the Samwel Cave, California.

Bull. Dept. Geol. Univ. Calif., IV, 163-169, pls. xxiv-xxv.

Abstracts in Geol. Centralbl., VIII, 374; X, 371; Rev. crit. Paléozool., X, 200.

—— 1906 A

The exploration of Samwel Cave.

Amer. Jour. Sci. (4), XXII, 235-247, 3 text-figs.

Abstract in Geol. Centralbl., XI, 106-107.

—— 1907 A

Reconnaisance of a recently discovered Quaternary cave deposit near Auburn, California.

Science (n.s.), XXV, 392-394.

This is known as the Hawver Cave.

Abstract in Sci. Progress, II, 502.

—— 1910 A

An aplodont rodent from the Tertiary of Nevada.

Bull. Dept. Geol., Univ. Calif., V, 397-403, 6 figs.

Describes *Aplodontia alexandræ*.

Abstract in Geol. Centralbl., XVI, 57.

—— 1925 A

Notes on the occurrence of mammalian remains in the Pleistocene of Mexico; with a description of a new species, *Capromeryx mexicana*.

Bull. Dept. Geol. Univ. Calif., XV, 137-152, 11 text-figs.

Abstract in Geol. Zentralbl., XXXIII, 46.

Furlong, E. L.—Continued 1927 A

The occurrence and phylogenetic status of *Merycodus* from the Mohave Desert Tertiary.

Bull. Dept. Geol. Univ. Calif., XVII, 145-186, pls. xxiv-xxviii, 28 text-figs.

—— See also **Stock** and **Furlong.**

——, and W. J. **Sinclair** 1904 A

Preliminary description of *Euceratherium collinum*.

Univ. of Calif., Publ. Amer. Arch. Ethn., II, 18, foot-note.

Gabb, William P. 1865 A

Communication on the San Luis Obispo quicksilver fossils.

Proc. Calif. Acad. Sci., III, 173-174.

Gadow, H. 1893 A

Vögel.

Bronn's Klassen und Ordnungen des Thierreichs.

Band VI; Abth. IV; Syst. Theil., i-vii+1-304 pages.

There is a copious bibliography.

—— 1896 C

Remarks on the supposed relationship of birds and dinosaurs.

Proc. Cambridge Philos. Soc., IX, 204-208.

—— 1901 A

The evolution of the auditory ossicles.

Anat. Anz., XIX, 396-411, 6 text-figs.

—— 1901 B

Amphibia and reptiles.

The Cambridge Natural History, 8vo., VIII, i-xiii+1-668 pages, 181 text-figs.

—— 1902 A

The evolution of horns and antlers.

Proc. Zool. Soc. Lond., 1902, I, 206-222, 1 text-fig.

—— 1902 B

The origin of the Mammalia.

Zeitschr. Morphol. Anthrop., IV, 345-364, 18 text-figs.

—— 1902 C

The wings and the skeleton of *Phalacrocorax harrisi*.

Novit. Zool., IX, 169-176, pls. xiv, xv.

—— 1902 D

Orthogenetic variations in the shells of Chelonia.

Arthur Willey's "Zoological Results," based on material from New Britain, New Guinea, etc., pt. 3, 207-222, pls. xxiv, xxv.

Gadow, H.—Continued 1905 A
The distribution of Mexican amphibians and reptiles.
Proc. Zool. Soc. Lond., 1905, II, 191-244, pls. vi, vii.
Deals also with the evolution of the region and the immigration and spreading of the Amphibia and Reptilia.

—— 1905 B
Orthogenetic variation.
Science (n.s.), XXII, 637-640.

—— 1910 A
Origin of vertebrates.
Proc. Linn. Soc. Lond., CXXII, 27-30.

—— 1910 B
Birds.
Encyclop. Brit., 11th ed., III, 959-978, 23 figs.

—— 1912 A
The one-sided reduction of the ovaries and oviducts in the Amniota, with remarks on mammalian evolution.
Proc. Zool. Soc. Lond., 1912, 808-821.

—— 1912 B
On the origin of feathers.
Arch. Naturges., LXXVIII, Abt. A, Heft. 7, 210-217, 7 text-figs.

—— 1913 A
The wanderings of animals.
Cambridge, Eng., i-viii+1-150 pages, 17 maps. One of the "Cambridge Manuals of Science."
The bibliography comprises 45 titles.

—— 1914 A
Presidential address before the section of zoology at the meeting in Birmingham, 1913.
Rep. Brit. Assoc. Adv. Sci., 83d Meet., Birmingham, 1913, 500-509.

—— 1916 A
Discussion on the "Biologia Centrali-Americana."
Proc. Zool. Soc. Lond., 1916, 544-545.

Gaillard, Claude 1898 A
Apparition des ours dés l'epoch miocène.
C. R. Acad. Sci. Paris, CXXVII, 1237-1239.
Describes *Ursus primævus*.

—— 1908 A
Les oiseaux des phosphorites du Quercy.
Ann. Univ. Lyon (n.s.), 1908, Fasc. 230, 1-178, pls. i-viii, 37 text-figs.
Pages 149 to 156 are a bibliography of the subject.

Ganin, M. 1880 A
Über die Entwicklung des Kopfskeletts bei Knochenfische (*Rhodeus, Gasterosteus*).
Zool. Anz., III, 140-143.

Ganzer, H. 1908 A
Über die Bewegungsbahn des Unterkiefers, insbesondere beim Menschen und bei den Nagertieren.
Sitz.-Ber. Ges. naturf. Freunde Berlin, 1908, 156-164.

Garbowski, Tad 1895 A
Zur Beurtheilung vertebraler Regionen bei Vögeln.
Anat. Anz., XI, 444-454, 2 figs.
There is a bibliography of 11 titles.

Gardner, James H. 1910 A
The Puerco and Torrejon formations of the Nacimiento group.
Jour. Geol., XVIII, 702-741, pl. i, 9 text-figs.
Abstract in Geol. Centralbl., XVI, 532-533.

Garman, S. 1884 E
Remarks on the disappearance of the ancient horses of America.
Proc. Bost. Soc. Nat. Hist., XXII, 252-253.

—— 1904 A
The chimæroids (Chismopnea Raf., 1815; Holocephala Müll., 1834), especially *Rhinochimæra* and its allies.
Bull. Mus. Comp. Zool., XLI, 243-272, pls. i-xv.

—— 1908 A
New Plagiostomia and Chismopnea.
Bull. Mus. Comp. Zool., LI, 249-256.

—— 1911 A
The Chismopnea (chimæroids).
Mem. Mus. Comp. Zool., XL, 81-101.

—— 1913 A
The Plagiostomia (Sharks, skates and rays).
Mem. Mus. Comp. Zool., XXXVI, i-xiv+1-515 pages, 77 plates.

—— 1917 A
The Galapagos tortoises.
Mem. Mus. Comp. Zool., XXX, 257-296, pls. i-xlii.

Garner, R. 1870 A
On the homologies in the extremities of the horse.
Rep. Brit. Assoc. Adv. Sci., XXXIX, Exeter, 1869, 121.

Garrod, A. H. 1872 A
Note on some of the cranial peculiarities of the woodpeckers.
Ibis (3), II, 357-360, 1 fig.

Garrod, A. H.—Continued 1873 C

On the value in classification of a peculiarity in the anterior margin of the nasal bones of certain birds.

Proc. Zool. Soc. Lond., 33-38, 11 text-figs.

—— 1873 D

On certain muscles of the thigh of birds and on their value in classification.

Proc. Zool. Soc. Lond., 1873, 626-644, 6 figs.

—— 1874 A

On certain muscles of birds and their value in classification. Pt. II.

Proc. Zool. Soc. Lond., 1874, 111-123.

—— 1874 B

On some points in the anatomy of the Columbæ.

Proc. Zool. Soc. Lond., 1874, 249-259, 2 figs.

—— 1876 A

On the anatomy of *Aramus scolopaceus*.

Proc. Zool. Soc. Lond., 1876, 275-277, 3 figs.

Gaskell, Walter Holbrook 1890 A

On the origin of vertebrates from a crustaceanlike ancestor.

Quart. Jour. Micr. Sci., xxxi, 379-444, pls. xxv-xxviii.

—— 1895 A

The origin of the vertebrates.

Proc. Cambridge Philos. Soc., ix, 19-47.

Pages 37-47 are occupied by a discussion of Dr. Gaskell's paper.

—— 1898 A

On the origin of vertebrates deduced from the study of *Ammocœtes*.

Jour. Anat. Physiol., Lond., xxxii (n.s. xii), 512-581, pl. xiii, 7 text-figs.

—— 1901 A

On the origin of vertebrates deduced from the study of *Ammocœtes*.

Jour. Anat. Physiol., Lond., xxxv (n.s. xv), 224-267, 12 figs.

—— 1905 A

On the origin of vertebrates.

Nature, lxxiii, 40-41.

—— 1908 A

The origin of the vertebrates.

i-x+1-537 pages, 168 text-figs.

The extensive bibliography occupies pages 501-515. Reviewed in Amer. Jour. Sci. (4), xxvii, 192; in Science (n.s.), xxix, 816-1818.

—— 1910 A

Origin of the vertebrates.

Proc. Linn. Soc. Lond., cxxii, 9-15.

Gass, J., and W. H. **Pratt** 1883 A

Bones of mammoth in Washington, Co., Iowa.

Proc. Davenport Acad. Sci., iii, 177-178.

Gaudry, Albert 1867 A

Animaux fossiles et géologie de l'Attique.

4to., Paris, 1862-1867, 1-475, atlas of 75 plates.

—— 1875 C

Sur une dent d'*Elephas primigenius*, trouvée sur la rivière Kouitchak dans l'Alaska.

Voyages à la côte nord-ouest de l'Amérique, 1870-1872, par Alph.-L. Pinart, 29-31, pl. A, figs. 1, 1a.

—— 1875 D

Sur une dent d'*Elephas primigenius*, trouvée par M. Pinard dans l'Alaska.

C. R. Acad. Sci. Paris, lxxv, 1281-1282.

—— 1875 E

Sur la découverte de batraciens proprement dits dans le terrain primaire.

C. R. Acad. Sci. Paris, lxxx, 441-443.

See also Jour. Zool. Paris, xiv, 38-41.

—— 1876 A

Les reptiles des schistes bitumineux d'Autun.

Bull. Soc. géol. France (3), iv, 721-723, pl. xxii.

—— 1884 A

Sur un sirénien d'espèce nouvelle trouvé dans le bassin de Paris.

Bull. Soc. géol. France (3), xii, 372-376, pl. xvii.

—— 1885 B

Nouvelle note sur les reptiles permiens.

Bull. Soc. géol. France (3), xiii, 44-51, pl. iv.

—— 1888 A

Sur les similitudes que plusieurs reptiles ont eues dans divers pays du monde vers la fin des temps primaires.

C. R. Congr. géol. internat., iii, Berlin, 1885, 1-4.

—— 1891 C

Die Vorfahren der Säugetiere in Europa.

Leipzig, i-viii+1-222 pages, 40 text-figs.

Translated from Albert Gaudry's Les ancêtres de nos animaux dans les temps géologiques. Paris, 1888.

—— 1892 B

Sur les charactères ostéologiques d'un *Mesoplodon sowerbyensis* mâle, échoué récemment sur le littoral de la France.

C. R. Acad. Sci. Paris, cxiv, 1283-1286.

Abstract in Rev. Scient., xlix, 730.

Gaudry, Albert—Continued 1893 A

L'éléphant de Durfort.

Extrait du volume du centenaire de la fondation du Muséum d'histoire naturelle. 1-25 pages, 1 double plate.

——— 1896 A

Essai de paléontologie philosophique; ouvrage faisant suite aux "Enchainements du monde animal dans les temps géologiques."

8vo., 1-231, 204 text-figs.

A review of this work by A. Tornquist appeared in Zool. Centralbl., IV, 1897, 680-685.

——— 1898 A

Rapport sur le concours du prix Cuvier.

C. R. Acad. Sci. Paris, CXXVI, 126-129.

——— 1901 A

Observations au sujet de la note de M. Priem.

Bull. Soc. géol. France (4), I, 504.

——— 1901 B

Sur la similitude des dents de l'homme et de quelques animaux.

Congr. internat. d'Anthrop., XII, Paris, 1900, 93-102, 513-525, 18 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 428-429.

——— 1902 A

Sur la patte antérieure des *Lophiodon*.

Bull. Soc. géol. France (4), II, 344.

——— 1902 B

Comparaison des dents de l'homme et des singes anthropomorphes.

C. R. Acad. Sci., Paris., CXXXIV, 269-270.

See also Bull. Soc. géol. France (4), II, 37.

——— 1903 A

Observations paléontologiques dans l'Alaska.

C. R. Acad. Sci. Paris, CXXXVII, 553-554.

——— 1906 A

Fossiles de Patagonie: Les attitudes de quelques animaux.

Ann. Paléont. Paris, I, 1-42, 53 text-figs.

Abstracts in Jahrb. Min. Geol. Pal., 1907, II, Ref., 136-147; Géol. Centralbl., VIII, 29.

——— 1906 B

Fossiles de Patagonie. Étude sur une portion du monde antarctique.

Ann. Paléont. Paris, I, 101-143 (fasc. III, 1-43), 25 text-figs.

Gaudry, Albert—Continued 1908 A

Fossiles de Patagonie. De l'économie dans la nature.

C. R. Acad. Sci. Paris, CXLVI, 1131-1134.

Gaupp, E. 1891 B

Die "Columella" der kionokranen Saurier.

Anat. Anz., VI, 107-117.

——— 1895 A

Ueber die Jochbogen-Bildungen am Schädel der Wirbelthiere.

Jahresber. Schles. Ges. vaterl. Kult., LXXII (1894), Abhl. II, Zool.-Bot., 56-63.

——— 1897 A

Die Entwickelung der Wirbelsäule.

Zool. Centralbl., IV, 533-550.

——— 1898 B

Die Metamerie des Schädels.

Anat. Hefte, Ergebn., VII, 793-885, 3 tables.

The bibliography comprises 91 titles.

——— 1899 A

Ontogenese und Phylogenese des schallleitenden Apparates bei den Wirbeltieren.

Anat. Hefte, Ergebn., VIII, 1898, 990-1149, 30 figs.

The bibliography embraces 95 titles.

——— 1900 A

Das Chondrocranium von *Lacerta agilis*.

Anat. Hefte, Arb., XV, 433-594, pls. xlii-xlvii.

Appended is a bibliography of 57 titles.

——— 1901 A

Ueber die Ala temporalis des Säugerschädels.

Anat. Anz., Ergänzungsh, XIX, 43.

——— 1901 B

Alte Probleme und neuere Arbeiten über den Wirbeltierschädel.

Anat. Hefte, Ergebn., X, 847-1001, 5 text-figs.

Pages 847-854 are a bibliography of the subject.

——— 1902 A

Ueber die Ala temporalis des Säugerschädels und die Regio orbitalis einiger anderer Wirbeltierschädel.

Anat. Hefte, Arb., XIX, 157-230, 15 figs.

There is a bibliography which includes 45 titles.

——— 1903 A

Zur Entwickelung der Schädelknochen bei den Teleostiern.

Anat. Anz. Ergänzungsh., XXIII, 113-123, 2 text-figs.

Gaupp, E.—Continued 1905 A

Neue Deutungen auf dem Gebiete der Lehre vom Säugetierschädel.

Anat. Anz., XXVII, 273-310, 9 text-figs.

—— 1905 B

Die Homologie des Unterkiefers in der Wirbeltierreihe.

Anat. Anz. Ergänzungsh., XXVII, 16, 17.

—— 1905 C

Die Nicht-Homologie des Unterkiefers in der Wirbeltierreihe.

Anat. Anz. Ergänzungsh., XXVII, 125-138, 7 text-figs.

See also Verh. Anat. Ges., XIX, Genf, 1905, 125-140, 7 figs.

—— 1905 D

Das Hyobranchialskelet der Wirbeltiere.

Anat. Hefte, Ergebn., XIV, 808-1048, 46 text-figs.

The citation of the literature of the subject occupies pages 809-823.

—— 1905 E

Die Nicht-Homologie des Unterkiefers in der Wirbeltierreihe.

C. R. Assoc. Anatomistes, VII, 159-161, 1 text-fig.; also in Verhandl. Anat. Ges., XIX, 125-140, 5 text-figs.

—— 1906 A

Ueber allgemeine und spezielle Fragen aus der Lehre vom Kopfskelett der Wirbeltiere.

Anat. Anz. Ergänzungsh., XXIX, 21-68, 16 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 52-55.

—— 1906 B

Die Entwickelung des Kopfskelettes.

Hertwig's "Handb. vergleich., experiment. Entwickelungslehre Wirbelth.," III, pt. 2, 573-874, text-figs. 324-406.

The list of works consulted is found on pages 855-873.

—— 1907 A

Demonstration von Präparaten, betreffend Knorpelbildung in Deckknochen.

Verh. Anat. Ges., XXI, Wurzburg, 251-252 (Anat. Anz., XXX, Ergänzungsh).

—— 1908 A

Ueber die Kopfgelenke der Säuger und des Menschen in morphologischer und funktioneller Beziehung.

Anat. Anz. Ergänzungsh., XXXII, 181-191, 1 text-fig.

Gaupp, E.—Continued 1908 B

Ueber Entwickelung und Bau der beiden ersten Wirbel und der Kopfgelenke von *Echidna aculeata*, nebst allgemeinen Bemerkungen über die Kopfgelenke der Amnioten.

Semon's "Zool. Forschungsr. in Austral.," III, 483-538, pl. lxvii, 20 text-figs. (Denkschr. Med. Ges. Jena, VI, pt. 2.)

A bibliography is found on pages 536-537.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 51, 92.

—— 1908 C

Zur Entwickelungsgeschichte und vergleichenden Morphologie des Schädels von *Echidna aculeata* var. *typica*.

Semon's "Zool. Forschungsr. in Austral.," III, 539-788, pls. lxviii-lxxv, 59 text-figs.

The extensive bibliography is found on pages 782-786.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 52-65.

—— 1910 A

Das Lacrimale des Menschen und der Säuger und seine morphologische Bedeutung.

Anat. Anz., XXXVI, 529-555, 14 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 42.

—— 1910 B

Erwiderung auf den Aufsatz von H. Fuchs: "Ueber das Pterygoid, Palatinum und Parasphenoid der Quadrupeden, etc."

Anat. Anz., XXXVII, 352-377.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 43.

—— 1910 C

Säugerpterygoid und Echidnapterygoid nebst Bemerkungen über das Säuger-palatinum und den processus basipterygoideus.

Anat. Hefte, Arb., XLII, 311-431, 41 text-figs.

There is a bibliography (pages 428-431) of 44 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 43-48.

—— 1910 D

Die Gehörknöchelchen- und Unterkiefer-Frage.

C. R. Congr. internat. Med., XVI, Budapest, 1909, sec. 1, 81-101.

There is a bibliography of 32 titles.

Gaupp, E.—Continued 1911 A

Ueber den N. trochlearis der Urodelen und über die Austrittsstellen der Gehirnnerven aus dem Schädelraum im allgemeinen.

Anat. Anz., XXXVIII, 401-444, 6 text-figs.

This paper is followed by an extensive list of the literature bearing on the subject.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 44.

—— 1911 B

Beiträge zur Kenntnis des Unterkiefers der Wirbeltiere. I: Der Processus anterior (Folii) des Hammers der Säuger und das Goniale der Nichtsäuger.

Anat. Anz., XXXIX, 97-135, 16 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 45-49.

—— 1911 C

Beiträge zur Kenntnis des Unterkiefers der Wirbeltiere. II: Die Zusammensetzung des Unterkiefers der Quadrupeden.

Anat. Anz., XXXIX, 433-473.

—— 1911 D

Beiträge zur Kenntnis des Unterkiefers der Wirbeltiere. III: Das Problem der Entstehung eines "sekundären" Kiefergelenkes bei den Säugern.

Anat. Anz., XXXIX, 609-666, 6 text-figs.

Following this paper is a bibliography of 112 titles.

—— 1912 A

Nachträgliche Bemerkungen zur Kenntnis des Unterkiefers der Wirbeltiere, insonderheit der Amphibien.

Anat. Anz., XL, 561-569.

Abstract in Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 448.

—— 1912 B

Die Verwandtschaftsbeziehungen der Säuger, vom Standpunkte der Schädelmorphologie aus erörtert.

Verh. internat. Zool.-Kongr., VIII, Graz, 1910, 215-240, 11 text-figs.

Brief abstract in Nature, LXXXIV, 319; Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 49.

—— 1913 A

Die Reichertsche Theorie (Hammer-, Amboss- und Kieferfrage).

Arch. Anat. Entwickl., 1912, Suppl.-Band., i-xiii+1-416 pages, 149 text-figs.

The extensive bibliography occupies pages 397-416.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 55-67.

Gawrilenko, A. 1924 A

Die Evolution des Karpus bei den Proboscidiern. Nebst Bemerkungen über phylogenetisches Altern.

Anat. Anz., LVIII, 218-244, 5 figs.

Gebhardt, F. A. M. Walter 1907 A

Ueber das älteste geologisch bekannte Vorkommen von Knochengewebe (Placodermen).

Anat. Anz. Ergänzungsh., XXX, 72-89.

Geddes, A. C. 1912 A

The origin of the vertebrate limb.

Jour. Anat., Physiol. Lond., XLVI, 350-383, 26 text-figs.

The article is followed by an extensive bibliography.

Gegenbaur, C. 1862 A

Ueber Bau und Entwickelung der Wirbelsäule bei Amphibien überhaupt, und beim Frosche insbesondere.

Abh. naturf. Ges. Halle, VI, 179-194, pl.

—— 1862 B

Untersuchungen zur vergleichenden Anatomie der Wirbelsäule bei Amphibien und Reptilien.

4to., Leipzig, 72 pages, 4 pls. (not seen).

—— 1863 A

Vergleichend-anatomische Bemerkungen über das Fussskelet der Vögel.

Arch. Anat. Entwickl. 1863, 450-472.

—— 1864 B

Ein Fall von erblichem Mangel der Pars acromialis Claviculæ mit Bemerkungen über die Entwickelung der Clavicula.

Jena. Zeitschr. Naturwise., I, 1-16.

—— 1864 C

Ueber die episternalen Skelettheile und ihr Vorkommen bei den Säugethieren und beim Menschen.

Jena. Zeitschr. Naturwiss., I, 175-195, pl. iv.

—— 1864 D

Ueber die Bildung des Knochengewebes.

Jena. Zeitschr. Naturwiss., I, 343-369, pl. viii.

—— 1865 C

Upon the episternal portions of the skeleton, as they appear in Mammalia and man.

Nat. Hist. Rev., V, 545-567, 11 figs.

From Jena. Zeitschr. Naturwiss, I, 175 seq.

—— 1866 A

Ueber den Brustgürtel und die Brustflosse der Fische.

Jena. Zeitschr. Naturwiss., II, 121-125.

Gegenbaur, C.—Continued 1867 A

Ueber primäre und secundäre Knochenbildung mit besonderer Beziehung auf die Lehre vom Primordialcranium.

Jena. Zeitschr. Naturwiss., III, 54-73.

—— 1867 B

Ueber die Entwickelung der Wirbelsäule des *Lepidosteus*, mit vergleichend-anatomischen Bermerkungen.

Jena. Zeitschr. Naturwiss., III, 359-420, pls. vii-ix.

—— 1870 A

Ueber das Gliedmaassenskelet der Enaliosaurier.

Jena. Zeitschr. Naturwiss., V, 332-359, pl. xiii.

Abstract in Jour. Anat. Physiol. Lond., IV, 308.

—— 1870 B

Ueber die Modificationen des Skelets der Hintergliedmaassen bei den Männchen der Selachier und Chimären.

Jena. Zeitschr. Naturwiss., V, 448-568, pl. xvi.

—— 1870 C

Ueber das Skelet der Gliedmaassen der Wirbelthiere im Allgemeinen und der Hintergliedmaassen der Selachier insbesondere.

Jena. Zeitschr. Naturwiss., V, 397-447, pls. xv, 7 text-figs.

—— 1871 A

Beiträge zur Kenntniss des Beckens der Vögel.

Jena. Zeitschr. Naturwiss., VI, 157-220, pls. v-vii, 5 text-figs.

There are, as foot-notes, numerous references to other authors.

—— 1871 B

Ueber die Kopfnerven von *Hexanchus* und ihr Verhältniss zur "Wirbeltheorie" des Schädels.

Jena. Zeitschr. Naturwiss, VI, 497-559, pl. xiii.

—— 1879 A

Zur Gliedmassenfrage. An die Untersuchungen v. Davidoff's angeknüpfte Bemerkungen.

Morphol. Jahrb., V, 521-525.

—— 1880 A

Kritische Bemerkungen über Polydactylie als Atavismus.

Morphol. Jahrb., VI, 585-596.

An English abridged translation is found in Jour. Anat. Physiol. Lond., XVI, 615-622.

Gegenbaur, C.—Continued 1888 A

Über polydactylie.

Morphol. Jahrb., XIV, 394-406.

Geikie, James 1894 A

The great ice age and its relation to the antiquity of man.

Third edition. London, 8vo., i-xxviii+1-850 pages, 18 maps, charts, 77 text-figs.

—— 1914 A

The antiquity of man in Europe.

Edinburgh, 8vo., i-xx+328 pages, pls. i-xxi, 9 text-figs., 4 maps.

Geinitz, E. 1903 A

Das Quartär Nordeuropas.

Frech's "Lethæa geognostica." III Th., II Bd., 42-304, numerous illustrations. (Continued in next.)

—— 1904 A

Das Quartär Nordeuropas.

Frech's "Lethæa geognostica," III Th., II Bd., 305-430, numerous illustrations.

The work cited here under Geinitz, E., 1903 A and 1904 A, abounds in references to the literature of the European Pleistocene.

Geinitz, H. B. 1847 B

Ueber die Auffindung von Ueberresten des *Basilosaurus* oder *Zygodon* im Allgemeinen und die des *Basilosaurus* oder *Hydrarchus* von Koch im Besonderen.

In Carus, C. G., 1847 A, 1-4.

——, and J. V. **Deichmüller** 1882 B

Nachträge zur Dyas II.

Mitt. Mus. Dresden, Heft 5, 1-46, pls. i-ix.

This is identical with Geinitz und Deichmüller, 1882 A.

—— See **Frech** and **Geinitz.**

Gelderen, Chr. van 1922 A

On the development of the sternum in reptiles.

Proc. Akad. Wet. Amsterdam, XXIV, 221-236, 7 figs.

—— 1923 A

On the development of the shoulder girdle and episternum in reptiles.

Proc. Akad. Wet. Amsterdam, XXVI, 15-31, 6 figs.

—— 1925 A

Die Entwicklung des Brustschulterapparats bei Sauriern.

Anat. Anz., LIX, 495-508, 4 figs.

Gemmellaro, M. 1921 A

Il *Neosqualodon assenzæ* Forsyth Major sp., del Museo Geologico della Universitá.

Gior. Sci. nat. econ. Palermo, xxxii, 121-154, 1 pl.

References to literature in foot-notes.

Gemminger, M. 1852 A

Ueber eine Knochenplatte im hinteren Sklerotikalsegment des Augus einiger Vögel.

Zeitschr. wiss. Zool., iv, 215-220, pl. xi.

Geoffroy St.-Hilaire, E. F. 1807 A

Sur les poissons, où l'on compare les pièces osseuses de leurs nageoires pectorales avec les os de l'extrémité antérieure des autres animaux à vertèbres.

Ann. Mus. hist. nat. Paris, ix, 357-372, pl. xix.

Abstract in Isis von Oken, ii, 1818, 1049-1052.

—— 1807 B

Considérations sur l'os furculaire, une des pièces de la nageoire pectorale.

Ann. Mus. hist. nat. Paris, ix, 413-427.

Abstract in Isis von Oken, ii, 1818, 1052-1055.

—— 1807 C

Sur les poissons, où l'on traite de leur sternum sous les point de vue de sa détermination et de ses formes générales.

Ann. Mus. hist. nat. Paris, x, 87-104, pl. iv.

Abstract in Isis von Oken, ii, 1818, 1055-1059.

—— 1807 D

Détermination des pièces qui composent le crâne des crocodiles.

Ann. Mus. hist. nat. Paris, x, 249-263, pl. v.

Abstract in Isis von Oken, ii, 1818, 275-279.

—— 1807 E

Considerations sur les pièces de la tête osseuse des animaux vertébrés, et particulièrement sur celles du crâne des oiseaux.

Ann. Mus. hist. nat. Paris, x, 342-365, pl. xxvii.

Abstract in Isis von Oken, ii, 1818, 279-283.

—— 1812 A

Tableau des quadrumanes.

Ann. Mus. hist. nat. Paris, xix, 85-122, 156-170.

Geoffroy St.-Hilaire, E. F.—Cont'd

1817 A

Du squelette des poissons ramené dans toutes ses parties à la charpente osseuse des autres animaux vertébrés, et premièrement de l'opercule des poissons.

Bull. Soc. Philom. Paris, 1817, 125-127.

For abstract see Isis von Oken, ii, 1818, 1419-1421; Bull. Soc. Philom. Paris, 1917, 125.

—— 1817 B

De la charpente osseuse des organes de la respiration dans les poissons, ramenée aux mêmes parties des autres animaux vertébrés.

Bull. Soc. Philom. Paris, 1817, 185-189.

For review see Isis von Oken, ii, 1818, 1422-1425; Bull. Soc. Philom. Paris, 1817, 185.

—— 1822 A

Sur les tiges montantes des vertèbres dorsales, pièces restreintes dans les mammifères à un état rudimentaire et portées chez les poissons au maximum du développement; pour servir à l'intelligence de la notice sur le "gaour."

Mém. Mus. hist. nat. Paris, ix, 76-88.

—— 1822 B

Considérations générales sur la vertèbre.

Mém. Mus. hist. nat. Paris, ix, 89-119, pls. v-vii.

—— 1824 A

Sur l'analogie des filets-pêcheurs de la baudroie avec une partie des apophyses montantes des vertèbres, et specialement avec les premiers rayons de la nageoire dorsale des silures.

Mém. Mus. hist. nat. Paris, xi, 132-142.

—— 1824 B

Sur une nouvelle détermination de quelques pièces mobiles chez la carpe, ayant été considérées comme les parties analogues des osselets de l'oreille; et sur la nécessité de conserver le nom de ces osselets aux pièces de l'opercule.

Mém. Mus. hist. nat. Paris, xi, 143-160, 258-260.

—— 1824 C

Sur la nature, la formation et les usages des pierres qu'on trouve dans les cellules auditives des Poissons.

Mém. Mus. hist. nat. Paris, xi, 241-257.

Geoffroy St.-Hilaire, E. F.—Cont'd

1824 D

De l'aile operculaire ou auriculaire des poissons, considérée comme un principal pivot, sur lequel doit rouler toute recherche de détermination des pièces composant le crâne des animaux; suivi de tableaux synoptiques donnant le nombre et expliquant la composition de ces pièces.

Mém. Mus. hist. nat. Paris, XI, 420-444, pl. xxi.

—— 1824 E

Sur une chaîne d'osselets découverte chez quelques poissons osseux, et annoncés comme les analogues des osselets de l'oreille.

Bull. Soc. Philom. Paris, 1824, 100-102.

—— 1824 F

Considérations et rapports nouveaux d'anatomie comparée concernant les mammifères à sabots.

Ann. Sci. nat., I, 80-83.

—— 1824 G

Observations sur les prétendus osselets de l'ouie trouvés par Ernest-Henri Weber.

Ann. Sci. nat., I, 436-440.

—— 1824 H

Composition de la tête osseuse de l'homme et des animaux.

Ann. Sci. nat., III, 173-192, 245-299 pl. xvi.

—— 1825 A

Sur quelques objections et remarques concernant l'aile operculaire ou auriculaire des poissons.

Mém. Mus. hist. nat. Paris, XII, 13-17.

—— 1825 B

Sur leurs affinités naturelles, desquelles résulte la nécessité d'une autre distribution générique, *Gavialis, Teleosaurus,* et *Steneosaurus;* etc.

Mém. Mus. hist. nat. Paris, XII, 97-155, pls. v, vi.

—— 1825 C

Mémoire sur les gavials.

Bull. Soc. Philom., Paris, 1825, 13-15..

—— 1832 A

Observations sur la concordance des parties de l'hyoide dans les quatre classes des animaux vertébrés, accompagnant, a titre de commentaire, le tableau synoptique, ou cette concordance est exprimée figurativement.

Nouv. Ann. Mus. hist. nat. Paris, I, 320-356, pl. xiii.

Geoffroy St.-Hilaire, Isidore 1835 A

Sur le genre cheval, et specialement sur l'hémione (*Equus hemionus* Pall).

Nouv. Ann. Mus. hist. nat. Paris, IV, 97-120, 1 pl.

Geol. Mag. 1912 A

The Permian Amphibia and Reptilia of North America.

Geol. Mag. (5), IX, 519-520.

A review of two publications issued by E. C. Case and one by S. W. Williston.

—— 1914 A

The type of *Pliolophus vulpiceps* Owen.

Geol. Mag. (6), I, 480.

Gervais, Paul M. 1839 A

See Hay, O. P., 1902 A, p. 97.

Abstract in Neues Jahrb. Min. Geogn. Geol., 1840, 120.

—— 1852 A

Zoologie et paléontologie française (animaux vertébrés).

Vol. I, i-iv+1-271 pages (Table methodique); vol. II (not continuously paged. Explication des planches); vol. III (Atlas de 45 planches).

First edition, issued in parts 1848-1852.

—— 1853 B

Sur la comparaison des membres chez les animaux vertébrés.

Ann. Sci. nat. (3), XX, 21-69.

—— 1853 C

Note sur le genre *Hyœnarctos.*

Ann. Sci. nat. (3), XX, 229-237, pl. xii.

—— 1855 B

Recherches sur les mammifères fossiles de l'Amérique méridionale.

Ann. Sci. Nat. (4) III, 330-338, pl. v.

See also C. R. Acad. Sci. Paris, 1855, 1112-1114.

—— 1856 A

Remarques sur les caractères que l'on peut tirer du sternum des oiseaux.

Ann. Sci. nat. (4), VI, 5-16.

—— 1859 A

Zoologie et paléontologie français.

Deuxième édition, accompagné d'un atlas de 84 planches et de figures intercalées dans le texte.

—— 1861 A

Note sur la première dentition de l'hyène.

Ann. Sci. nat. (4), XV, 142-148.

—— 1868 A

Sur un crâne de *Ziphius cavirostris* de Corse.

Mém. Acad. Sci. Lett. Montpellier, VII, 141-142, pl. v.

Gervais, Paul M.—Continued 1871 B

Sur le genre *Squalodon*.

Mém. Acad. Sci. Lett. Montpellier, VII, 79-91, pls. ii, iii.

—— 1873 B

Mémoire sur plusiers espèces de mammifères fossiles propres à l'Amérique méridionale.

Mém. Soc. géol., France (2), IX, art. 5. 1-44 pls. xxi-xxix.

—— 1875 A

Remarks ostéologiques à propos du mazame d'Amérique.

Alph.—L. Pinart's Voyages à la côte de l'Amérique, 49-51, pl. D.

See also Jour. Zool., Paris, IV, 263-266.

—— 1878 A

See Hay, O. P., 1902 A, p. 97.

English translation in Ann. Mag. Nat. Hist. (5), III, 95-96.

Gessner, Ignaz 1921 A

Ueber die Gliederung der Rippen bei den Säugetieren.

Anat. Anz., LIV, 271-273.

Ghigi, Alessandro 1900 A

Sui denti dei Tapiridi.

Anat. Anz., Ergänzungsh., XVIII, 17-29, 9 text-figs.

—— 1900 B

Sull' origine dell molari dei mammiferi.

Riv. ital. Pal., VI, 98-107.

Gibbes, Charles Drayton 1882 A

Prehistoric foot-prints in the sandstone quarry of the Nevada State Prison.

Proc. Calif. Acad. Sci., V, 1-8, 4 views of the prison yard and 3 sheets showing footprints.

—— 1882 B

Fossil jaw of mammoth.

Proc. Calif. Acad. Sci., V, 9-10, 1 plate. Appended is a note on large bird tracks on the floor of the quarry at Carson City, Nevada.

Gibbs, Morris 1898 A

Horns of American antelope.

Pop. Sci. News, XXXII, 198.

Gibian, Annie 1912 A

Beiträge zur Kenntnis des Hyobranchialskeletes der Haie. Eine vergleichend-embryologische Untersuchung.

Morphol. Jahrb., XLV, 57-96, pl. iv, 13 text-figs.

Appended is a bibliography of 19 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 67-69.

Gidley, J. W. 1900 A

Abstract in Geol. Centralbl., II, 156.

—— 1901 A

Tooth characters and revision of the North American species of the genus *Equus*.

Bull. Amer. Mus. Nat. Hist., XIV, 91-142, pls. xviii-xxi, 27 text-figs.

Abstracts in Science (n.s.), XIV, 699; Amer. Jour. Sci. (4), XV, 1903, 161; Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 122-123; Geol. Centralbl., III, 27; Rev. crit. Paléozool., VII, 12.

—— 1902 A

A fossil armadillo from Texas.

Amer. Mus. Jour., II, 24-25.

—— 1903 A

On two species of *Platygonus* from the Pliocene of Texas.

Bull. Amer. Mus. Nat. Hist., XIX, 477-481, 5 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 469; Geol. Centralbl., VI, 53; Jahresber Anat. Entwickl. (N.F.), X, Abth. 3, 183; Rev. crit. Paléozool., IX, 6.

—— 1903 B

A new three-toed horse.

Bull. Amer. Mus. Nat. Hist., XIX, 465-476.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 468-469; Geol. Centralbl., V, 461; Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 184; Rev. crit. Paléozool., IX, 5.

—— 1903 C

The fresh-water tertiary of northwestern Texas. American Museum expeditions of 1899-1901.

Bull. Amer. Mus. Nat. Hist. XIX, 617-636, pls. lii-lviii, 4 text-figs.

—— 1904 A

New or little known mammals from the Miocene of South Dakota. American Museum Expedition of 1903. Pt. I: Geological notes; pt. III: Dicotylidæ.

Bull. Amer. Mus. Nat. Hist., XX, 241-246; 265-268, figs. 14, 15.

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—— 1903 B

Homologies of anterior limb.

Science (n.s.), XVII, 488.

—— 1904 A

The name mammal and the idea expressed.

Rep. Smithson. Instn., 1903 (1904), 537-544.

—— 1904 B

"Horses" not horses.

Science (n.s.), XIX, 737-738.

Gill, Theodore—Continued 1905 A
A new introduction to the study of fishes.
Science (n.s.), XXI, 653-661.
An extended review of volume vii of the "Cambridge Natural History."

—— 1905 B
An interesting Cretaceous chimæroid egg-case.
Science (n.s.), XXII, 601-602.
Abstract in Geol. Centralbl., VIII, 378.

—— 1905 C
Origin of fresh-water faunas (abstract).
Rep. internat. Geogr. Congr., VIII, Washington, 617.

—— 1905 D
The sculpin and its habits.
Smithson. Misc. Coll., XLVII, pt. 3, 348-359, text-figs. 45-55.

—— 1905 E
The life history of the angler.
Smithson. Misc. Coll., XLVII, 500-516, pls. lxxiii-lxxv, text-figs. 94-103.

—— 1905 F
The tarpon and lady-fish and their relations.
Smithson. Misc. Coll., XLVIII, 31-46, pls. xvii-xxix, 7 text-figs.

—— 1905 G
The family of cyprinids and the carp as its type.
Smithson. Misc. Coll., XLVIII, 195-217, pls. xlv-lvii.

—— 1907 A
Systematic zoology: Its progress and purpose.
Science (n.s.), XXVI, 489-505.

—— 1907 B
The lumpsucker; its relationship and habits.
Smithson. Misc. Coll., L, 175-194, figs. 32-47.

—— 1908 A
The millers-thumb and its habits.
Smithson. Misc. Coll., LII, 101-116, figs. 26-39.

—— 1908 B
The story of the devil fish.
Smithson. Misc. Coll., LII, 155-180, figs. 40-54.

—— 1909 A
The selachians admitted as a distinct class.
Science (n.s.), XXIX, 193-194.

Gill, Theodore—Continued 1909 B
Classification of the true fishes.
Science (n.s.), XXIX, 837-838.

—— 1910 A
Classification of the edentates.
Science (n.s.), XXXII, 56.

—— 1910 B
First use of Amphibia in its modern sense.
Science (n. s.), XXXI, 958-959.

—— 1910 C
The structural characteristics and relations of the apodal fishes.
Science (n.s.), XXXI, 789-790.

—— 1912 D
Systematic zoology: Its progress and purpose.
Proc. internat. Zool. Congr., Boston, VII, 1907, 786-806.

Gilmore, C. W. 1902 A
Discovery of teeth in *Baptanodon*, an ichthyosaurian from the Jurassic of Wyoming.
Science (n. s.), XVI, 913-914.

—— 1903 A
Discovery of dental grooves and teeth in the type of *Baptanodon* (*Sauranodon*) Marsh.
Science (n. s.), XVII, 750.
Abstract in Geol. Centralbl., VI, 55.

—— 1905 A
Osteology of *Baptanodon* Marsh.
Mem. Carnegie Mus., II, 77-129, pls. vii-xii, 26 text-figs.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1906, I, Ref., 311; Ibid, 1909, I, 447; Geol. Centralbl., VIII, 378; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 162.

—— 1905 B
The mounted skeleton of *Triceratops prorsus*.
Proc. U. S. Nat. Mus., XXIX, 433-435, pls. i, ii.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1906, II, Ref., 136-137; Geol. Centralbl., XI, 108; Nature, LXXIII, 1906, 228, fig. 1; Knowledge, II, 304; Rev. Géol. et Sci. con., IV, 1923, 93.

—— 1906 A
Notes on some recent additions to the exhibition series of vertebrate fossils.
Proc. U. S. Nat. Mus., XXX, 607-611, pls. XXX-XXXV.
Abstracts in Geol. Centralbl., XI, 106; Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 131; Rev. crit. Paléozool., X, 200.

Gilmore, C. W.—Continued 1906 B

Notes on osteology of *Baptanodon*.

Mem. Carnegie Mus., II, 325-337, pls. xxxvi-xxxviii, 13 text-figs.

Abstracts in Geol. Centralbl., XI, 108; Sci. Progress, I, 459; Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 447; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 162.

—— 1906 C

Notes on a newly mounted skeleton of *Merycoidodon*, a fossil mammal.

Proc. U. S. Nat. Mus., XXXI, 513-514, pl. xii.

Brief abstracts in Geol. Centralbl., XI, 107; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 167.

—— 1907 A

The type of the Jurassic reptile *Morosaurus agilis* redescribed, with a note on *Camptosaurus*.

Proc. U. S. Nat. Mus., XXXII, 151-165, pls. xii, xiii, 9 text-figs.

Abstracts in Geol. Centralbl., XI, 333; Sci. Progress, II, 515; Neues Jahrb. Min. Geol. Pal., 1908, II, Ref. 437; Rev. crit. Paléozool., XI, 146; Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 169.

—— 1907 B

A new species of *Baptanodon* from the Jurassic of Wyoming.

Amer. Jour. Sci. (4), XXIII, 193-196, with 2 text-figs.

Brief abstract in Neues Jahrb. Min. Geol. Pal., 1908, II, Ref., 441.

Abstract in Sci. Progress, II, 517.

—— 1908 A

Smithsonian exploration in Alaska in 1907 in search of Pleistocene fossil vertebrates.

Smithson. Misc. Coll., LI, 1-38, pls. i-xiii, 4 text-figs.

Abstract with figure in Nature, LXXVIII, 346.

Abstract in Geol. Centralbl., XII, 219.

—— 1909 A

Osteology of the Jurassic reptile *Camptosaurus*, with a revision of the species of the genus, and descriptions of two new species.

Proc. U. S. Nat. Mus., XXXVI, 197-332, pls. vi-xx, 48 text figs.

Abstracts in Amer. Jour. Sci. (4), XXVIII, 410; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 300-301; Geol. Centralbl., XIV, 490; Rev. crit. Paléozool., XIII, 204-206; Nature, LXXX, 378.

Gilmore, C. W.—Continued 1909 B

A new rhynchocephalian reptile from the Jurassic of Wyoming, with notes on the fauna of "quarry 9."

Proc. U. S. Nat. Mus., XXXVII, 36-52, with pl. xi and 3 text-figs.

Abstracts in Geol. Centralbl., XIV, 491; Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 466; Rev. crit. Paléozool., XIV, 13; Nature, LXXXII, 74; Sci. Progress, IV, 668.

—— 1910 A

Leidyosuchus sternbergii, a new species of crocodile from the Ceratops beds of Wyoming.

Proc. U. S. Nat. Mus., XXXVIII, 485-502, pls. xxiii-xxix, 2 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, 319; Nature, LXXXV, 288; Sci. Progress, V, 682.

—— 1911 A

[Remains of vertebrates found in the Ripley formation in Georgia.]

Bull. Geol. Surv. Georgia, XXVI, 208-209.

—— 1911 B

A new fossil alligator from the Hell Creek beds of Montana.

Proc. U. S. Nat. Mus., XLI, 297-302, pls. xxvi, xxvii, 1 text-fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 479; Geol. Centralbl., XVII, 42; Sci. Progress, VI, 572.

Review in Rev. crit. Paléozool., XVI, 6.

—— 1912 A

A new mosasauroid reptile from the Cretaceous of Alabama.

Proc. U. S. Nat. Mus., XLI, 479-484, pls. xxxix, xl, 3 text-figs.

Abstracts in Geol. Centralbl., XVII, 705; Neues Jahrb. Min. Geol. Pal., 1912, I, 137; Sci. Progress, VIII, 642.

Review in Rev. crit. Paléozool., XVI, 237. Abstract in Nature, XCII, 695.

—— 1912 B

The mounted skeletons of *Camptosaurus* in the United States National Museum.

Proc. U. S. Nat. Mus., XLI, 687-696, pls. lv-lxi, 4 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 362.

Review in Rev. crit. Paléozool., XVI, 233.

—— 1912 C

Remarks on the skeleton of the dinosaur, *Stegosaurus*.

Science (n.s.), XXXV, 972.

Abstract in Nature, XCI, 142.

—— 1912 D

Mosasaurian in Fox Hills? formation.

Folio U. S. Geol. Surv., No. 181, 2.

Gilmore, C. W.—Continued 1913 A

A new dinosaur from the Lance formation of Wyoming.

Smithson. Misc. Coll., LXI, art. 5, 1-5, 5 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1913, II, 512; Geol. Centralbl., XX, 704.

—— 1914 A

Osteology of the armored Dinosauria in the United States National Museum, with special reference to the genus *Stegosaurus*.

Bull. U. S. Nat. Mus., LXXXIX, 1-143, pls. i-xxxvii, 73 text-figs.

Abstracts in Nature, XCV, 276; XCVI, 152; Rev. crit. Paléozool., XXI, 46; Amer. Jour. Sci. (4), XLVII, 237-238; Geol. Zentralbl., XXII, 61.

—— 1914 B

A new ceratopsian dinosaur from the Upper Cretaceous of Montana, with note on *Hypacrosaurus*.

Smithson. Misc. Coll., LXIII, No. 3, 1-10, 2 plates, 3 text-figs.

Abstracts in La Nature, Paris, 1923, Sept. 29, 93, 3 figs.; Geol. Zentralbl., XXI, 623; XXVIII, 346.

—— 1914 C

A second occurrence of ichthyosaurian remains in the Benton cretaceous.

Science (n.s.), XXXIX, 210.

Abstract in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 511.

—— 1914 D

A fossil hunting expedition in Montana.

Smithson. Misc. Coll., LXIII, No. 8, 18-21, with figs. 20-22.

Abstract in Nature, XCIV, 468; XCV, 136.

—— 1915 A

Osteology of *Thescelosaurus*, an orthopodous dinosaur from the Lance formation of Wyoming.

Proc. U. S. Nat. Mus., XLIX, 591-616, pls. lxxix-lxxxii, 20 text-figs.

Abstract with figure in Nature, London, XCVI, 716.

Review in Rev. crit. Paléozool., XXVII, 208.

—— 1915 B

A new restoration of *Stegosaurus*.

Proc. U. S. Nat. Mus., XLIX, 355-357, pl. lii, 1 text-fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1922, I, 255; Geol. Mag. (6), II, 525.

—— 1915 C

[Brief descriptions of dinosaurs.]

Bull. U. S. Geol. Surv., DCXII, 52-54; 58-59, pls. x, xi, text-fig. 9.

Gilmore, C. W.—Continued 1915 D

Observations on new dinosaurian reptiles.

Jour. Wash. Acad. Sci., V, 411, 488.

See also Science (n.s.), XLI, 1915, 878.

—— 1915 E

On the fore limb of *Allosaurus fragilis*.

Proc. U. S. Nat. Mus., XLIX, 501-513, 7 figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1922, I, Ref., 136.

Review in Rev. crit. Paléozool., XXVII, 208.

—— 1915 F

On the genus *Trachodon*.

Science (2), XLI, 658-660.

Review in Rev. crit. Paléozool., XXVII, 208.

—— 1915 G

Hunting vertebrate fossils in Montana.

Smithson. Misc. Coll., LXV, No. 6, 15-17, figs. 15-16.

—— 1915 H

The fossil turtles of the Uinta formation.

Mem. Carnegie Mus., VII, 101-161, pls. xviii-xxvii, 22 text-figs.

Separates of this paper were distributed November 1915. On the cover of a copy issued by the Carnegie Museum is printed the date November 1916.

—— 1916 A

Description of a new species of tortoise from the Jurassic of Utah.

Ann. Carnegie Mus., X, 7-12, pls. i, ii, 2 text-figs.

Abstracts in Rev. crit. Paléozool., XXVII, 210; Geol. Zentralbl., XXIX, 187.

—— 1916 B

Mode of progression of *Ceratosaurus*.

Scient. Amer. Suppl., No. 2098, 187.

—— 1916 C

Description of two new species of fossil turtles, from the Lance formation of Wyoming.

Proc. U. S. Nat. Mus., L, 641-646, pls. xxxii-xxxv.

Abstract in Rev. crit. Paléozool., XXVII, 210.

—— 1916 D

Contributions to the geology and palæontology of San Juan County, New Mexico. 2: Vertebrate faunas of the Ojo Alamo, Kirtland and Fruitland formations.

U. S. Geol. Surv. Profess. pap., XCVIII, 279-308, pls. lxiv-lxxviii, text-figs. 28-42.

Abstract in Rev. crit. Paléozool. Paris, XXIV, 90-91.

Gilmore, C. W.—Continued 1917 A

Brachyceratops a ceratopsian dinosaur from the Two Medicine formation of Montana, with notes on associated fossil reptiles.

U. S. Geol. Surv. Profess. pap., CIII, 1-45, pls. i-iv, 57 text-figs.

Abstract in Geol. Zentralbl., XXVII, 412.

—— 1918 A

The armored dinosaur.

Scient. Monthly, VI, 475-477, 2 text-figs.

—— 1918 B

Report on vertebrate paleontology in U. S. National Museum for 1917.

Rep. U. S. Nat. Mus., 1917 (1918), 58-59, 62.

—— 1918 C

A newly mounted skeleton of the armored dinosaur *Stegosaurus stenops*, in the United States National Museum.

Proc. U. S. Nat. Mus., LIV, 383-390, pls. lvii-lxiii.

Abstract in Amer. Jour. Sci. (4), XLVII, 237-238; Neues Jahrb. Min. Geol. Pal., 1922. I, Ref., 255.

—— 1919 A

A new restoration of *Triceratops*, with notes on the osteology of the genus.

Proc. U. S. Nat. Mus., LV, 97-112, pls. iii-ix, 6 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1922, I, Ref., 256; Sci. Progress, XIV, 241.

Review in Rev. crit. Paléozool., XXVII, 11 (title and date of publication incorrectly given).

—— 1919 B

Dimetrodon gigas, a giant spiny lizard from Texas bone beds.

Scient. Amer. Suppl., LXXXVIII (No. 2271), 20-21, 3 figs.

—— 1919 C

New fossil turtles, with notes on two described species.

Proc. U. S. Nat. Mus., LVI, 113-132, pls. xxix-xxxvii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 386; Rev. Geol. et Sci. con., IV, 1923, 92-93.

Review in Rev. crit. Paléozool., XXVII, 10.

Gilmore, C. W.—Continued 1919 D

A mounted skeleton of *Dimetrodon gigas* in the United States National Museum with notes on the skeletal anatomy.

Proc. U. S. Nat. Mus., LVI, 525-539, pls. lxx-lxxiii, 8 text-figs.

Abstracts in Rev. crit. Paléozool., Paris, XXIV, 147-148; XXVII, 209; Neues Jahrb. Min. Geol. Pal., 1921, I, Ref., 361-362; Nature. CV, 118, fig. 1.

—— 1919 E

An ornithomimid dinosaur in the Potomac of Maryland.

Science (n.s.), L, 394-395.

—— 1920 A

Reptilian faunas of the Torrejon, Puerco, and underlying Upper Cretaceous formations of San Juan County, New Mexico.

U. S. Geol. Surv. Profess. Pap., CXIX, 1-68, 71, with pls. i-xxvi and 33 text-figs.

The imprint gives the year 1919, but the paper was issued April 20, 1920.

Abstract in Nature, CVIII, 482.

—— 1920 B

Osteology of the carnivorous Dinosauria in the United States National Museum, with special reference to the genera *Antrodemus* (*Allosaurus*) and *Ceratosaurus*.

Bull. U. S. Nat. Mus., CX, 1-154, 36 pls., 78 text-figs.

The bibliography comprises 57 titles.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 253-255; Sci. Progress, XVI, 215.

—— 1920 C

Reptile reconstructions in the United States National Museum.

Rep. Smithson. Instn. for 1917 (1920), 271-280, pls. i-vi.

Abstracts in Geol. Zentralbl., XXVII, 363; XXVIII, 345; Nature, XCVII, 386.

—— 1921 A

A new horned dinosaur from Canada. The *Styracosaurus albertensis* with a six-foot skull bristling with horns.

Scient. Amer. Monthly, III, 7-8, 3 figs.

Abstract in Rev. crit. Paléozool., XXVII, 210.

—— 1921 B

An extinct sea-lizard from western Kansas.

Scient. Amer., CXXIV, 273, 280, 3 figs.

Abstract in Rev. crit. Paléozool., XXVII, 209.

Gilmore, C. W.—Continued 1921 C

Fossil footprints of Texas.

Scient. Ameri., CXXIV, 333, 340, 4 figs. An unsigned article.

—— 1921 D

Discovery of sauropod dinosaur remains in the Upper Cretaceous of New Mexico.

Science (n.s.), LIV, 274.

Abstract in Rev. crit. Paléozool., XXVII, 209.

—— 1921 E

The fauna of the Arundel formation of Maryland.

Proc. U. S. Nat. Mus., LIX, 581-594, pls. CX-CXIV.

Abstracts in Rev. crit. Paléozool., XXVI, 5; XXVII, 209.

—— 1921 F

Remarks on some additions to the fossil vertebrate collection in the National Museum.

Jour. Wash. Acad. Sci., II, 66.

—— 1922 A

A new sauropod dinosaur from the Ojo Alamo formation of New Mexico.

Smithson. Misc. Coll., LXXII, No. 14, 1-9, 2 pls.

Review in Rev. crit. Paléozool., XXVII, 209.

Abstract in Geol. Zentralbl., XXVIII, 345.

—— 1922 B

The smallest known horned dinosaur *Brachyceratops*.

Proc. U. S. Nat. Mus., LXI, art. 3, 1-4, pls. 1-4.

Abstract in Rev. Géol. et Sci. conn., IV, 1923, 93-94; V, 126; in Rev. crit. Paléozool., XXVII, 11; XXVIII, 21.

—— 1922 C

The horned dinosaurs.

Rep. Smithson. Instn. for 1920, 381-387, pls. i-viii.

Abstract in Rev. crit. Paléozool., XXVII, 210.

—— 1922 D

A new description of *Saniwa ensidens* Leidy, an extinct varanid lizard from Wyoming.

Proc. U. S. Nat. Mus., LX, art. XXIII, 1-28, pls. i-iii, 22 text-figs.

Abstract in Rev. Géol. et Sci. conn., V, 127-128.

Review in Rev. crit. Paléozool., XXVII, 208; XXVIII, 22.

—— 1922 E

Note on dinosaur tracks in Texas.

Jour. Geol. XXX, 360.

Gilmore, C. W.—Continued 1923 A

A new fossil turtle, *Kinosternon arizonense*, from Arizona.

Proc. U. S. Nat. Mus., LXII, art. 5, 1-8, pls. 1-5, 7 text-figs. Issued Feb. 6, 1923.

Abstract in Rev. crit. Paléozool., XXVII, 217.

—— 1923 B

A new species of *Corythosaurus*, with notes on other Belly River Dinosauria.

Canad. Field-Naturalist, XXXVII, 46-52.

Abstract in Rev. crit. Paléozool., XXVII, 217.

—— 1923 C

Giant reptile taken to the capital.

Science (n.s.), LVIII, XII (Sept. 7).

—— 1923 D

A new species of *Aspideretes* from the Belly River Cretaceous of Alberta.

Trans. Roy. Soc. Canada (3), XVII, sec. iv, 1-10, pls. i-v.

—— 1924 A

Notes on Charles M. Sternberg's paper on Lance formation of southern Saskatchewan. (Sternberg, C. M., 1924 A.)

Canad. Field-Naturalist, XXXIII, 68-69.

—— 1924 B

A new cœlurid dinosaur from the Belly River Cretaceous of Alberta.

Can. Geol. Surv. Dept. Mines, Bull. XXXVIII (Geol. Ser. XLIII), 1-12, pl. i, text-figs. 1-5.

—— 1924 C

A new species of hadrosaurian dinosaur from the Edmonton formation (Cretaceous) of Alberta.

Can. Geol. Surv. Dept. Mines, Bull. XXXVIII (Geol. ser. XLIII), 13-26, pls. ii-v; text-figs. 6, 7.

—— 1924 D

Report on a collection of vertebrates from Wood Mountain, southern Saskatchewan.

Can. Geol. Surv. Dept. Mines, Bull. XXXVIII (Geol. ser. XLIII), 27-28.

—— 1924 E

On the genus *Stephanosaurus*, with a description of the type specimen of *Lambeosaurus lambei* Parks.

Can. Geol. Surv. Dept. Mines, Bull. XXXVIII, 29-48, pls. vi-x, text-figs. 8-12.

Gilmore, C. W.—Continued 1924 F

On the skull and skeleton of *Hypacrosaurus*, a helmet-crested dinosaur from the Edmonton Cretaceous of Alberta.

Can. Geol. Surv. Dept. Mines, Bull. XXXVIII, 49-64, pls. xi, xii, text-figs. 13-17.

—— 1924 G

On *Troodon validus;* an orthopodous dinosaur from the Belly River Cretaceous of Alberta, Canada.

Bull. Univ. Alberta, Dept. Geol., I, 1-43, pls. i-xv, 3 text-figs.

Note on in Amer. Jour. Sci. (5), VII, 510.

Abstracts in Amer. Jour. Sci. (5), VII, 510; Geol. Zentralbl., XXXI, 415.

—— 1924 H

A new species of *Laosaurus*, an ornithischian dinosaur from the Cretaceous of Alberta.

Trans. Roy. Soc. Canada (3), XVIII, 1-7, pls. i, ii.

—— 1924 I

The Dinosaur National Monument and its fossils.

Wash. Acad. Sci., XIV, 381 (abstract).

—— 1924 J

Expedition to the Dinosaur National Monument, Utah.

Smithson. Misc. Coll., LXXVI, 12-16, figs. 16-21.

—— 1924 K

Collecting fossil footprints in Virginia.

Smithson. Misc. Coll., LXXVI, 16-18, 2 figs.

—— 1925 A

A nearly complete articulated skeleton of *Camarasaurus*, a saurischian dinosaur from the Dinosaur National Monument, Utah.

Mem. Carnegie Mus., X, 347-384, pls. xiii-xvii, text-figs. 1-5.

—— 1925 B

Osteology of ornithopodous dinosaurs from the Dinosaur National Monument, Utah. *Camptosaurus medius, Dryosaurus altus, Laosaurus gracilis.*

Mem. Carnegie Mus., X, 385-409, pl. xviii, text-figs. 1-8.

—— 1926 A

Fossil footprints from the Grand Canyon.

Smithson. Misc. Coll., LXXVII, No. 9, 1-41, 12 pls., 22 text-figs.

Abstract in Petermann's Geogr, Mitteil. 1927, Heft 1, 2, 54.

Gilmore, C. W.—Continued 1926 B

A new aëtosaurian reptile from the Morrison formation of Utah.

Ann. Carnegie Mus., XVI, 325-342, pls. xxvii-xxix, 4 text-figs.

There is appended a bibliography of 17 titles.

—— 1926 C

Prehistoric footprints from the Grand Canyon.

Science (n.s.), LXIII, May 21, xvi.

—— 1926 D

Footprints in the rocks of ages.

Nature Mag., VII, 362-364, 5 figs.

—— 1926 E

Diplodocus, an amphibious dinosaur.

Nature Mag., VIII, 35, 1 fig.

—— 1926 F

Ceratosaurus, a flesh-eating dinosaur.

Nature Mag., VIII, 91, 1 fig.

—— 1926 G

Fossil footprints from the Grand Canyon.

Bull. Geol. Soc. Amer., XXXVII, 240-241 (abstract).

—— 1926 H

Brachyceratops, the smallest American horned dinosaur.

Nature Mag., VIII, 163, 1 fig.

—— 1926 I

Thescelosaurus; a bird-footed dinosaur.

Nature Mag., VIII, 280, 1 fig.

—— 1926 J

Identification of fossils from Lance formation, Wyoming.

U. S. Geol. Surv. Profess. Pap., CXLV, 28.

—— 1926 K

On a nearly complete lizard skull from the Oligocene of Nebraska.

Univ. Kan. Sci. Bull., XVI, 229-232, pl. xv.

—— 1926 L

Description of mosasaurians from the Ripley formation, Tennessee.

U. S. Geol. Surv. Profess. Pap., CXXXVII, 191-192, pl. lxii, figs. 5, 8; pls. lxxi, lxxii.

—— 1926 M

Stegosaurus, an armored dinosaur.

Nature Mag., VIII, 348-349, fig.

—— 1927 A

Trachodon, the duck-billed dinosaur.

Nature Mag., IX, 35, fig.

Issued late in Dec. 1926.

Gilmore, C. W.—Continued 1927 B
Ossified tendons found in dinosaurs.
Ann. Med. Hist., IX, 94-97, figs. 1, 2.

—— 1927 C
Collecting fossil footprints in the Grand Canyon, Arizona.
Smithson. Misc. Coll., LXXVIII, art. 7, 45-48, figs. 52, 53.

—— 1927 D
Fossil footprints from the Grand Canyon: second contribution.
Smithson. Misc. Coll., LX, art. 3, 1-78, 21 pls., 37 text-figs.
The bibliography presents 31 titles.

—— 1927 E
On fossil turtles from the Pleistocene of Florida.
Proc. U. S. Nat. Mus., LXXI, art 15, 1-10, pls. i-v, text-figs. 1-4.

—— 1927 F
Fossil footprints in the Grand Canyon.
Jour. Wash. Acad. Sci., XVII, 272.

—— 1927 G
The fossil lizards of North America.
Mem. Nat. Acad. Sci., XXII, 1-198, 27 pls., 106 figs.
The bibliography occupies pages 165-169.

—— 1927 H
Note on a second occurrence of the mosasaurian reptile *Globidens*.
Science (n.s.), LXVI, 452.

—— 1927 I
Triceratops, a horned dinosaur.
Nature Mag., IX, 393, fig.

—— 1928 A
Fossil footprints from the Grand Canyon: Third Contribution.
Smithson. Misc. Coll., LXXX, art. 8, 1-16, pls. i-v, 7 text-figs.

—— See also **Peterson** and **Gilmore**.

Girard, Charles F. 1851 A
A monograph of the cottoids.
Smithson. Contrib. Knowl., III, art. 3, 1-80, pls. i-iii.
The osteology is discussed on pages 14-26 and illustrated in plate iii.

—— 1851 B
On the genus *Cottus* auct.
Proc. Bost. Soc. Nat. Hist., III, 183-190.

—— 1852 A
Révision du genre *Cottus* des auteurs.
Nouv. Mém. Soc. Helvét. Sci. Nat., XII, art. 3, 1-28.

Girtanner, A. 1901 A
Der Moschusochse (*Ovibos moschatus* Zimm.).
Ber. St. Gall. naturw. Ges., 1899-1900, 120-146, plate.
Abstract in Geol. Centralbl., II, 574.

Goddard, Malcolm 1907 A
Fish remains from the marine Lower Triassic of Aspen Ridge, Idaho.
Bull. Dept. Geol., Univ. Calif., V, 145-148, 5 figs.
Abstracts in Geol. Centralbl., XII, 227; Neues Jahrb. Min. Geol. Pal., 1908, II, Ref., 446; Rev. crit. Paléozool., XI, 228.

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—— 1912 F

Notes on the principles of quadrupedal locomotion and on the mechanism of the limbs in hoofed animals.

Ann. N. Y. Acad. Sci., xxii, 267-294, figs. 1-7.

Abstract in Rev. crit. Paléozool., xx, 46.

Gregory, W. K.—Continued 1913 A

Relations of the Tupaiidæ and of Eocene lemurs, especially *Notharctus*.

Bull. Geol. Soc. Amer., xxiv, 117 (abstract).

Abstract in Geol. Zentralbl., xxi, 37.

—— 1913 B

Homology of the "lacrimal" and of the "alisphenoid" in recent and fossil reptiles.

Bull. Geol. Soc. Amer., xxiv, 241-246.

See also abstract, 118 of the same volume.

Abstract in Geol. Zentralbl., xxi, 39.

—— 1913 C

Relationship of the Tupaiidæ and of Eocene lemurs, especially *Notharctus*.

Bull. Geol. Soc. Amer., xxiv, 247-252.

—— 1913 D

Crossopterygian ancestry of the Amphibia.

Science (n.s.), xxxvii, 806-808.

—— 1913 E

Critique of recent work on the morphology of the vertebrate skull, especially in relation to the origin of mammals.

Jour. Morphol., xxiv, 1-42, 25 figs.

The bibliography presents titles of 40 books and papers.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xix, pt. 3, 62-64.

—— 1914 A

Skeleton of *Notharctus*, an Eocene lemuroid.

Bull. Geol. Soc. Amer., xxv, 141 (abstract).

—— 1914 B

Phyletic relationships of the Lemuroidea.

Bull. Geol. Soc. Amer., xxv, 141-142 (abstract).

—— 1914 C

Locomotive adaptations in fishes illustrating "habitus" and "heritage."

Ann. N. Y. Acad. Sci., xxii, 267-268.

—— 1914 D

Conference on convergent evolution.

Ann. N. Y. Acad. Sci., xxii, 293-295.

—— 1914 E

Convergence and allied phenomena in the Mammalia.

Rep. Brit. Assoc. Adv. Sci., lxxxiii, Birmingham, 1913, 525-526.

Gregory, W. K.—Continued 1914 F

Exhibition of a fossil skeleton of *Notharctus rostratus*, an American Eocene lemur, with remarks on the phylogeny of the Primates.

Rep. Brit. Assoc. Adv. Sci., LXXXIII, Birmingham, 1913, 529-530.

—— 1914 G

Note on auditory ossicles of rodents.

Bull. Amer. Mus. Nat. Hist., XXXVIII, 380.

—— 1915 A

I: On the relationship of the Eocene lemur *Notharctus* to the Adapidæ and to other Primates.

II: On the classification and phylogeny of the Lemuroidea.

Bull. Geol. Soc. Amer., XXVI, 419-446.

—— 1915 B

The base of the cranium in anthropoids and man.

Ann. N. Y. Acad. Sci., XXIV, 349-351.

—— 1915 C

An American Eocene lemur (*Notharctus* Leidy).

Ann. N. Y. Acad. Sci., XXIV, 383-384.

—— 1915 D

Present status of the problem of the origin of the Tetrapoda, with special reference to the skull and paired limbs.

Ann. N. Y. Acad. Sci., XXVI, 317-383, pl. iv, 15 text-figs.

—— 1915 E

Present status of the problem of the origin of birds.

Ann. N. Y. Acad. Sci., XXVI, 447-448.

—— 1916 A

Studies on the evolution of the Primates. Part I: The Cope-Osborn "Theory of trituberculy" and the ancestral molar patterns of the Primates.

Bull. Amer. Mus. Nat. Hist., XXXV, 239-257, pl. i, 18 text-figs.

Abstract in Rev. crit. Paléozool., XXI, 9; L'Anthropologie, Paris, XXVIII, 1917, 157-159.

—— 1916 B

Studies on the evolution of the Primates. Part II: Phylogeny of recent and extinct anthropoids, with special reference to the origin of man.

Bull. Amer. Mus. Nat. Hist., XXXV, 258-355, 37 text-figs.

Abstract in Rev. crit. Paléozool., XXI, 9.

Gregory, W. K.—Continued 1916 C

Theories of the origin of birds.

Ann. N. Y. Acad. Sci., XXVII, 31-38.

Abstracts in Ann. N. Y. Acad. Sci., XXVI, 447; Rev. crit. Paléozool., XXI, 43.

—— 1916 D

Recent progress in vertebrate palæontology. Amphibians, reptiles.

Science (n.s.), XLIII, 105-107.

—— 1917 A

Evolution of the human face. Chief stages in its development from the lowest forms of life to man.

Amer. Mus. Jour., XVII, 377-388, 11 ills.

—— 1917 B

The coal measures Amphibia of North America.

Amer. Naturalist, LI, 311-320.

A review of Moodie, R. S., 1916 A.

—— 1917 C

Second report of the committee on the nomenclature of the cranial elements in the Permian Tetrapoda.

Bull. Geol. Soc. Amer., XXVIII, 973-975.

Followed by appendices presenting remarks by R. Broom, D. M. S. Watson and S. W. Williston.

—— 1917 D

Genetics *versus* paleontology.

Amer. Naturalist, LI, 622-635.

—— 1918 A

The evolution of orthodonty.

Dental Cosmos, May 1918.

Recorded here from reprint, 1-11.

—— 1919 A

The pelvis of dinosaurs; a study of the relations between muscular stresses and skeletal forms.

Copeia, No. 69, 18-20.

—— 1919 B

The evolution of the human face.

Nat. Hist., XIX, 421-425, 9 figs.

—— 1920 A

Studies in comparative myology and osteology: No. IV: A review of the evolution of the lacrymal bone of vertebrates with special reference to that of mammals.

Bull. Amer. Mus. Nat. Hist., XLII, 95-203, pl. xvi, 196 text-figs.

Pages 250-263 are occupied by the extensive bibliography.

Abstract in Sci. Progress, XVI, 213.

Discussed in Sefve, I. 1927 A, 72.

Gregory, W. K.—Continued 1920 B

Studies in comparative myology and osteology. No. V: On the anatomy of the pre-orbital fossæ of Equidæ and other ungulates.

Bull. Amer. Mus. Nat. Hist., XLII, 265-284, pl. xviii, 26 text-figs.

There is a bibliography of 15 titles.

Abstract in Sci. Progress, XVI, 214.

—— 1920 C

Restoration of *Camarasaurus* and life model.

Proc. Nat. Acad. Sci., VI, 16.

Abstract in Geol. Zentralbl., XXV, 540.

—— 1921 A

On the structure and relations of *Notharctus*, an American Eocene primate.

Mem. Amer. Mus. Nat. Hist. (n.s.), III, pt. ii, 49-243, pls. xxiii-lix, 84 text-figs.

The bibliography, 242-243, presents 62 titles.

—— 1921 B

Erwin S. Christman, 1885-1921. Draughtsman, artist, sculptor.

Nat. Hist., XXI, 620-625, 7 figs.

—— 1922 A

The origin and evolution of the human dentition.

Baltimore. Williams and Wilkins Co., i-xviii+1-548 pages, 15 pls., 353 text-figs.

The bibliography is found on pages 520-530.

Note on in Anat. Anz., LVI, 303.

This work was originally published in The Journal of Dental Research, as follows: In vol. II, 1920, 89-175, pls. i-iv; 215-282, pls. v-vii; 357-415, pls. viii-xiii; 607-717; in vol. III, 1921, 88-228, pls. xiv, xv.

—— 1923 A

A Jurassic fish fauna from western Cuba, with an arrangement of the families of holostean ganoid fishes.

Bull. Amer. Mus. Nat. Hist., XLVIII, 223-242, 6 figs.

—— 1923 B

A forerunner of the horned dinosaurs.

Nat. Hist., XXIII, 192.

—— 1924 A

A fossil ganoid fish (*Lepidotus? lacotanus*, new species) from the Lower Cretaceous of South Dakota.

Amer. Mus. Novit., No. CXXXIV, 1-8, 2 figs.

—— 1924 B

The gorilla's foot.

Nature, CXIII, 421-423; 457-458, 6 figs.

Gregory, W. K.—Continued 1925 A

A dissenting opinion.

Proc. Nat. Acad. Sci., XI, art. 12, 751.

In Osborn, H. F., 1925 C.

—— 1926 A

The skeleton of *Moschops capensis* Broom, a dinocephalian reptile from the Permian of South Africa.

Bull. Amer. Mus. Nat. Hist., LVI, 179-251, pls. i-xxi, 29 text-figs.

The bibliography comprises 32 titles.

—— 1926 B

Paleontology of the human dentition. Ten structural stages in the evolution of the cheek teeth.

Amer. Jour. Phys. Anthrop., IX, 401-426, 8 figs.

The bibliography includes 7 titles.

—— 1927 A

Two views of the origin of man.

Science (n.s.), LXV, 601-605.

—— 1927 B

Mongolia the new world.

Scient. Monthly, XXIV, 5-14, with figs.

—— 1927 C

The Mongolian life record.

Scient. Monthly, XXIV, 169-181, 10 figs.

—— 1927 D

Mongolian mammals of the "Age of Reptiles."

Scient. Monthly, XXIV, 225-235, 10 figs.

—— 1927 E

The Mongolian age of mammals.

Scient. Monthly, XXIV, 337-347, 9 figs.

—— 1927 F

Did man originate in central Asia?

Scient. Monthly, XXIV, 385-401, 8 figs.

—— 1927 G

The palæomorphology of the human head: Ten structural stages from fish to man. I: The skull in norma lateralis.

Quart. Rev. Biol., II, 267-279, 5 figs.

The bibliography comprises 30 titles.

—— 1927 H

Hesperopithecus apparently not an ape nor a man.

Science (n.s.), LXVI, 579-581.

—— 1927 I

How near is the relationship of man to the chimpanzee-gorilla stock?

Quart. Rev. Biol., II, 549-560, 9 figs.

—— 1928 A

A tour of the new fish hall.

Nat. Hist., XXVIII, 3-17, figs. 1-11.

Gregory, W. K., and L. A. **Adams** 1915 A

The temporal fossæ of vertebrates in relation to the jaw muscles.

Science (n.s.), XLI, 763-765.

—— and C. L. **Camp** 1918 A

Studies in comparative myology and osteology. No. III.

Bull. Amer. Mus. Nat. Hist., XXXVIII, 447-563, pls. xxxix-l.

Reviewed in Nat. Hist., XIX, 731-732.

—— and H. J. **Cook** 1926 A

New materials for the study of evolution: A series of primitive fossil rhinoceros skulls (*Trigonias*) from the Lower Eocene of Colorado.

Geol. Soc. Amer. Prelim. list, XXXIX, 59.

—— —— 1927 A

New material for the study of evolution: A series of primitive fossil rhinoceros skulls (*Trigonias*) from the Lower Oligocene of Colorado.

Bull. Geol. Soc. Amer., XXXVIII, 235.

—— and Milo **Hellman** 1923 A

Notes on the type of *Hesperopithecus haroldcookii* Osborn.

Amer. Mus. Novit., LIII, 1-16, 5 pages of figures.

Abstracts in Rev. crit. Paléozool., XXVII, 216; Neues Jahrb. Min. Geol. Pal., 1923. II, 290.

—— —— 1923 B

Further notes on the molars of *Hesperopithecus* and *Pithecanthropus*.

Bull. Amer. Mus. Nat. Hist., XLVIII, 509-530, 15 figs.

Abstract in Geol. Zentralbl., XXX, 253.

—— —— 1926 A

The dentition of *Dryopithecus* and the origin of man.

Anthrop. Pap. Amer. Mus. Nat. Hist., XXVIII, 1-123, pls. i-xxv, 32 text-figs.

The bibliography presents 88 titles.

——, and R. **Kellogg** 1927 A

A fossil porpoise from California.

Amer. Mus. Novit., CCLXIX, 1-7, 3 figs.

——, R. W. **Miner**, and G. K. **Noble** 1923 A

The carpus of *Eryops* and the structure of the primitive chiropterygium.

Bull. Amer. Mus. Nat. Hist., XLVIII, 279-288, 4 figs.

There is a bibliography of 12 titles.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1924, I, 276; Geol. Zentralbl., XXX, 444; Nature, CXII, 806.

Gregory, W. K., and C. C. **Mook** 1925 A

On *Protoceratops*, a primitive ceratopsian dinosaur from the Lower Cretaceous of Mongolia.

Amer. Mus. Novit., CLVI, 1-9, 3 figs.

The bibliography comprises 27 titles.

——, and G. K. **Noble** 1924 A

The origin of the mammalian alisphenoid bone.

Jour. Morph., XXXIX, 435-461, pl. i, 13 text-figs.

The bibliography presents 33 titles.

——, and G. G. **Simpson** 1920 A

Cretaceous mammal skulls from Mongolia.

Amer. Mus. Novit., CCXXV, 1-20, 19 figs.

—— See **Berry**, E. W., and W. K. **Gregory** 1906 A

—— See also **Granger** and **Gregory**.

Grevé, Carl 1891 A

Die geographische Verbreitung der Hyaeniden und Caniden.

Zool. Jahrb. Syst., V, 400-424.

There is appended a list of 41 works on the subject.

—— 1900 A

Die geographische Verteilung der Wildschafe.

Korres.-Bl. Ver. Riga, XLIII, 131-145.

—— 1901 A

Die Verbreitung von *Ovibos moschatus* Blainv. einst und jetzt.

Sitz.-Ber., naturf. Ges. Dorpat, XII (1900), 371-374.

—— 1902 A

Die fossilen und recenten Edentaten und deren Verbreitung.

Sitz.-Ber. naturf. Ges. Dorpat., XIII, 77-107.

Abstracts in Geol. Centralbl., V, 376; Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 183.

—— 1905 A

Was wir über Stellers Seekuh wissen.

Korres.-Bl. Ver. Riga, XLVIII, 145-156, 4 figs., a map.

There is a bibliography of 75 titles.

Grevé, Carl—Continued 1911 A
Schädel der Stellerschen Seekuh.
Korres.-Bl. Ver. Riga, LIV, 37, figure.
A figure is presented to illustrate Grevé's paper in volume XLVIII, 145-156, of the same journal.

Grier, N. M. See Hitchcock and Grier.

Grieve, Symington 1883 A
Notice of the discovery of remains of the great auk or garefowl (*Alca impennis*, L.) on the Island of Oronsay, Argyllshire.
Jour. Linn. Soc. Zool., XVI, 479-487, pl. ix.

Grinnell, George Bird 1904 A
The mountain sheep and its range.
Pages 270-348 in American Big Game and Its Haunts, by George Bird Grinnell.

——— 1923 A
An old-time bone hunt.
Nat. Hist., XXIII, 329-336, 2 figs.
An account of the expedition undertaken by Prof. O. C. Marsh in 1870 to the then Wild West, with pictures of the members of the party.

Grinnell, Hilda Wood 1918 A
A synopsis of the bats of California.
Univ. Calif. Publ. Zool., XVII, 223-404, pls. xiv-xxiv, 24 text-figs.
Pages 376-382 are the bibliography.

Grinnell, J. 1912 A
The bighorn of the Sierra Nevada.
Univ. Calif. Publ. Zool., X, 143-153, text-figs. i-iv.
Describes *Ovis cervina sierræ*, n. subsp.

Grobben, K. 1904 A
Ueber das Becken der Sirenen.
Verh. zool.-bot. Ges. Wien, LIV, 142-143.

Groghan, George 1831 A
Journal of voyage to explore the country adjacent to the Ohio River.
Monthly Amer. Jour. Geol., I, 257-272.
Voyage made in 1765 to Bigbone Lick, Kentucky.

Grote, Albert 1926 A
Über das knorpelige und knöcherne Nasenskelett eines *Siredon pisciformis*.
Morphol. Jahrb., LVI, 459-488, 6 figs.
In the bibliography are 28 titles.

Grote, Hermann 1902 A
Ueber die Functionen des Vogelschnabels.
Ornith. Monatsber., X, 59-63.

Gruber, Wenzel 1873 A
Ueber supernumeräre Knocken im Jochbogen.
Arch. Anat., Physiol., Med., 1873, 337-347, pl. vii.

Gudernatsch, J. F. 1909 A
Manatus latirostris Harl. Biologische und morphologische Beiträge.
Zool. Jahrb. Syst., XXVII, 225-236, pl. ix, 3 text-figs.

Gudger, E. W. 1907 A
A note on the hammerhead shark (*Sphyrna zygæna*) and its food.
Science (n.s.), XXV, 1005-1006.

——— 1910 A
The jaws of the spotted sting ray, *Aëtobatus narinari*.
Jour. Elisha Mitchell Sci. Soc., XXVI, 58-59.
See also Science (n.s.), XXXI, 917.

——— 1914 A
History of the spotted eagle ray, *Aëtobatus narinari*, together with a study of its external structures.
Publ. Carnegie Instn. Wash., No. 183, 243-323, 10 pls., 19 text-figs.
Appended is an extensive bibliography.

——— 1918 A
Sphyræna barracuda; its morphology, habits and history.
Publ. Carnegie Instn. Wash., No. 252, art. IV, 55-108, pls. i-vii, 5 text-figs.
The bibliography comprises 62 titles.

Günther, Albert C. 1847 A
Von dem Rumpfskelett des *Hydrarchus*.
In Carus, C. G., 1847 A, 9-12.

——— 1858 A
On the systematic arrangement of the tailless batrachians and the structure of *Rhinophrynus dorsalis*.
Proc. Zool. Soc. Lond., XXVI, 1858, 339-352.

——— 1876 A
Note on *Chrysochloris trevelyani*.
Ann. Mag. Nat. Hist. (4), XVII, 346-348.

——— 1887 A
Siluridæ.
Encyclop. Brit., 9th ed., XXII, 67-69, 5 text-figs.

——— 1898 A
On gigantic tortoises.
Proc. Linn. Soc. Lond., CX, 14-29.
Is accompanied by a list of 51 papers on the subject.

——— 1908 A
Agamidæ and Iguanidæ.
Ann. Mag. Nat. Hist. (8), II, 523-524.

Guérin, Raoul 1874 A
Études zoologiques et paléontologiques sur la famille des cétacés.
Paris, 1874, i-iii+1-145 pages, pls. i-iii.
Pages 135-145 are the bibliography.

Guernsey, J. A. 1831 A
Mastodon near Rochester, N. Y.
Amer. Jour. Sci. (i), XIX, 358-359, figure.

Guettard, —— 1752 A
Suite du mémoire dans lequel on compare le Canada à la Suisse, par rapport à ses minéraux.
Mém. Acad. Sci., France, 1752 (1756), 323-360, pls. viii-xii.

Guitel, Frédéric 1896 A
Recherches sur le développement des nageoires paires du *Cyclopterus lumpus* L.
Arch. Zool. Exper. (3), IV, 345-470, pls. vi-x, 9 text-figs.

Guldberg, Gustav 1894 A
Ueber temporäre äussere Hinterflossen bei Delphin-Embryonen.
Verh. Anat. Ges., VIII, 92-95.

—— 1903 A
Ueber die Wanderungen verschiedener Bartenwale.
Biol. Centralbl., XXIII, 803-816.

—— 1904 A
Ueber die Wanderungen verschiedener Bartenwale.
Biol. Centralbl., XXIV, 371-384, 391-396.
Continued from vol. XXIII, 816.
Appended is a bibliography of 48 titles.

Gulliver, George 1869 A
On certain nondescript bones in the skull of osseous fishes.
Ann. Mag. Nat. Hist. (4), IV, 397-398, 1 fig.

Gutberlet, John Earl 1915 A
On the osteology of some of the Loricati.
Ill. Biol. Monogr., II, No. 2, 1-30, pls. i-v.
There is a bibliography of 19 titles.

H. H. 1927 A
Pleistocene restorations.
Mus. Graphic, I, 165-167, 2 figs.

Haacke, Wilhelm 1886 A
Der Nordpol als Schöpfungszentrum der Landfauna.
Biol. Zentralbl., VI, 363-370.

Haeckel, Ernst 1868 A
Natürliche Schöpfungsgeschichte.
8vo., i-xvi+1-568 pages, with pls. and figs. First edition.

—— 1873 A
Natürliche Schöpfungsgeschichte.
8vo., Berlin, i-xlvi+1-688 pages, pls. i-xvi, 19 text-figs. Fourth edition.
Translation into English in two volumes, 1876, revised by E. Ray Lankester.

Haeckel, Ernst—Continued 1893 A
Systematische Einleitung: Zur Phylogenie der australischen Fauna.
Denk. med.-naturw. Ges. Jena, IV, i-xxiv.
Forms part of Semon's "Zool. Forschungsreisen."

—— 1908 A
Unsere Ahnenreihe (*Progonotaxis hominis*).
Festschr. 350-jahr. Jubelf. Thuring. Univ., 1-56, pls. i-vi.

Hagenbach, E. 1841 A
Ueber ein besonderes, mit dem Hammer der Säugethiere in Verbindung stehendes Knöchelchen.
Arch. Anat., Physiol., wiss. Med., 1841, 46-54, pl. iii.

Hager, Albert D. 1861 A
Fossil elephant. Fossil whale.
Report on the Geology of Vermont, 1861, 933-941. Also in Hager's Report of 1862 called Report on the economical geology, physical geography, and scenery of Vermont, 205-211.

Hagmann, Gottfried 1907 A
Über das Gebiss von *Cœlogenys* und *Dasyprocta* in seinen verschiedenen Stadien der Abkauung.
Zeitschr. Morphol. Anthrop., X, 464-480, pls. xxv, xxvi, 26 text-figs.

—— 1909 A
Über diluviale Murmeltiere aus dem Rheingebiet und ihre Beziehungen zu den lebenden Murmeltieren Europas.
Mitt. Geol. Landesanst., Elsass-Loth., VI, 369-460, pls. vii, viii, 1 table.
There is a bibliography of 19 titles.

Hague, Florence 1924 A
The chondrocranium of *Amia calva*.
Jour. Morph., XXXIX, 267-277, pls. i-iii.
The literature cited embraces 22 titles.

Hahn, Walter L. 1909 A
The mammals of Indiana.
A descriptive catalogue of the mammals occurring in Indiana in recent times.
Geol. Surv. Ind., XXXIII, 417-663.

Hall, E. Raymond 1926 A
A new marten from the Pleistocene cave deposits of California.
Jour. Mamm., VII, 127-130, pl. xiv.

—— 1927 A
Species of the mammalian subfamily Bassariscinæ.
Bull. Dept. Geol. Univ. Calif., XVI, 435-448, pl. lxiv, 2 text-figs.

Hall, James 1861 A
Catalogue of additions to the cabinet from January 1, 1860, to January 1, 1861.
Rep. State Cab., N. Y., XIV, 13-15.

—— 1871 B
Mounting of the Cohoes mastodon skeleton.
Rep. State Cab., N. Y., XXI, 7-9.

—— 1888 A
Report of the Director [of the State Museum of Natural History].
Rep. N. Y. State Mus., XLI, 15-48.

Hall, T. S. 1911 A
On the systematic position of the species of *Squalodon* and *Zeuglodon* described from Australia and New Zealand.
Proc. Roy. Soc. Victoria (n.s.), XXIII, 257-265, pl. xxxvi.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 132; Nature, LXXXV, 160; Sci. Progress, VI, 565.

Haller, B. 1906 A
Über den Schultergürtel der Teleostier.
Arch. mikr. Anat. Bonn, LXVII, 231-266, pls. xvi-xvii.
The bibliography consists of 15 titles.

Haller, Graf 1922 A
Über den Gaumen der amnioten Wirbeltiere. II Teil: Über den Gaumen der Säugetiere.
Zeitschr. Anat. Entwicklungsges., Abt. I, LXIV, 1-40, 23 figs.
The bibliography occupies page 40.

—— 1923 A
Ueber die Bildung der Hypophyse bei Selachiern.
Morphol. Jahrb., LIII, 95-135, 20 figs.
The literature is cited in foot-notes.

—— 1924 A
Über die Entwicklung der Hypophyse bei der Reptilien.
Morphol. Jahrb., LIII, 305-318, 9 figs.

—— 1926 A
Das Mundskelett der Wirbeltiere.
Morphol. Jahrb., LVI, 446-458, 4 text-figs.

Hamburger, Richard 1904 A
Ueber die paarigen Extremitäten von *Squalius, Trigla, Periophthalmus* und *Lophius*.
Rev. suisse Zool., XII, 71-148, pls. ii, iii.
There is a bibliography of 56 titles.

Hamilton, Marquis of 1910 A
Antlers and the classification of deer.
Field, CXVI, 199.

Hammarsten, Olof D. 1911 A
Über die Innervation der Bauchflossen bei den Teleostiern.
Morphol. Jahrb., XLII, 665-697, pl. ix, 12 text-figs.

Hancock, A., and T. **Atthey** 1869 C
On a new labyrinthodont amphibian from the Northumberland coal-field, and on the occurrence in the same locality of *Anthracosaurus russelli*.
Ann. Mag. Nat. Hist. (4), IV, 182-189.
This is the same paper as Hancock and Atthey, 1869 A.

—— —— 1869 D
Note on *Anthracosaurus*.
Ann. Mag. Nat. Hist. (4), IV, 270-271.

Hanke, Herbert 1914 A
Ein Beitrag zur Kenntnis der Anatomie des äusseren und mittleren Ohres der Bartenwale.
Jena. Zeitschr. Naturwiss., LI, 487-524, pls. vi-viii, 11 text-figs.
A portion of the literature of the subject is listed on pages 523-524.

—— 1915 A
Ueber die Brustflosse von *Mesoplodon bidens* (Sow.).
Anat. Anz., XLVIII, 59-62, 2 figs.

Hankin, E. H., and M. S. **Watson** 1914 A
On the flight of pterodactyls.
Aeronaut. Jour. London, XVIII, 324-335, 5 figs.

Hanna, G. Dallas 1919 A
Geological notes on the Pribilof Islands, Alaska, with an account of the fossil diatoms.
Amer. Jour. Sci. (4), XLVIII, 216-224.
There is a bibliography of 10 titles.

—— 1923 A
Results of preliminary examination of seven samples of sediments from near Lomita.
Bull. S. Calif. Acad. Sci., XXII, 64-65, pl. ix.

——, and Mary E. **McLellan** 1924 A
A new species of whale from the type locality of the Monterey group.
Proc. Calif. Acad. Sci. (4), XIII, 237-241, pls. v-ix.

Hannibal, Harold 1922 A
Notes on the Tertiary sirenians of the genus *Desmostylus*.
Jour. Mamm., III, 238-240, pls. xi, xii.

Hansemann, D. 1910 A

Demonstration eines *Carcharodon* zahnes aus Spitzbergen.

Sitz.-Ber. Ges. naturf. Freunde Berlin, 1910, 387-389.

Hanson, F. B. 1918 A

Nerve foramina in the pig scapula.

Anat. Record, xv, 289-297, 12 figs.

—— 1919 A

The coracoid of *Sus scrofa*.

Anat. Record, xvi, 197-202, 6 figs.

—— 1919 B

The ontogeny and phylogeny of the sternum.

Amer. Jour. Anat., xxvi, 41-115, 49 figs.

The bibliography presents 52 titles.

—— 1920 A

The history of the earliest stages in the human clavicle.

Anat. Record, xix, 309-317, pls. i-iv.

There is a bibliography of 12 titles.

—— 1920 B

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Proc. Amer. Philos. Soc., XLII, 268-274.

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Amer. Geologist, XXXII, 115-120.

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—— 1904 B

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Science (n.s.), XIX, 254.

—— 1904 C

A new gigantic tortoise from the Miocene of Colorado.

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Bull. Amer. Mus. Nat. Hist., XXII, 27-31, 7 text-figs.

Abstracts in Neues Jahrb. Min., Geol., Pal., 1910, II, Ref., 302; Rev. crit. Paléozool., X, 150; Sci. Progress, I, 460.

Hay, O. P.—Continued 1906 C

On two interesting genera of Eocene turtles, *Chisternon* Leidy and *Anosteira* Leidy.

Bull. Amer. Mus. Nat. Hist., XXII, 155-160, 3 text-figs.

Abstracts in Geol. Centralbl., XI, 474-475; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 302; Rev. crit. Paléozool., XI, 149.

——— 1906 D

Descriptions of *Terrapene eurypygia* and *Chelydra serpentina*.

Maryland Geol. Surv. Pliocene and Pleistocene, 169, 170, pl. xl, fig. 2.

——— 1907 A

A new genus and species of fossil shark related to *Edestus* Leidy.

Science (n.s.), XXVI, 22-24, 1 fig.

——— 1907 B

Descriptions of seven new species of turtles from the Tertiary of the United States.

Bull. Amer. Mus. Nat. Hist., XXIII, 847-863, pl. liv, 20 text-figs.

Abstract in Geol. Centralbl., XI, 332.

——— 1907 C

A new fossil stickleback fish from Nevada.

Proc. U. S. Nat. Mus., XXXII, 271-273, 3 text-figs.

Abstracts in Geol. Centralbl., XI, 334; Sci. Progress, II, 522; Rev. crit. Paléozool., XI, 227.

——— 1908 A

The fossil turtles of North America.

Carnegie Instn. Wash. Publ. No. 75, i-iv+1-568 pages, pls. 1-113, 704 text-figs.

Reviewed in Science (n.s.), XXVIII, 1908, 803-804; Amer. Jour. Sci., XXVI, 516; Sci. Progress, III, 465-467; Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 451-452; Geol. Zentralbl., XIII, 241-244; Science (n.s.), XXIX, 341-342; Naturw. Rundschau, XXIV, 1909, 652-654; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 159; Nature, LXXIX, 91.

——— 1908 B

Dr. W. J. Holland on the skull of *Diplodocus*.

Science (n.s.), XXVIII, 517-519.

——— 1908 C

On the habits and the pose of the sauropodus dinosaurs, especially of *Diplodocus*.

Amer. Naturalist, XLII, 672-681.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 442-443; Sci. Progress, III, 463; Nature, LXXIX, 104; Naturw. Rundschau. XXIV, 1908, 162.

Hay, O. P.—Continued 1908 D

Descriptions of five species of North American fossil turtles, four of which are new.

Proc. U. S. Nat. Mus., XXXV, 161-169, pls. xxvi-xxvii, 3 text-figs.

Abstract in Geol. Centralbl., XII, 601; Rev. crit. Paléozool., 13, 80.

——— 1908 E

On certain genera and species of carnivorous dinosaurs, with special reference to *Ceratosaurus nasicornis* Marsh.

Proc. U. S. Nat. Mus., XXXV, 351-366, 4 text-figures.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 443; Sci. Progress, III, 469; Rev. crit. Paléozool., XIII, 79; Geol. Centralbl., XIII, 203; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 160.

——— 1909 A

On the skull and brain of *Triceratops*, with notes on the brain-cases of *Iguanodon* and *Megalosaurus*.

Proc. U. S. Nat. Mus., XXXVI, 95-108, pls. i-iii.

Abstracts in Science (n.s.), XXIX, 713; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 297; Rev. crit. Paléozool., 13, 203.

——— 1909 B

Descriptions of two species of fossil turtles, *Toxochelys stenopora* and *Chisternon? interpositum*, the latter hitherto unknown.

Proc. U. S. Nat. Mus., XXXVI, 191-196, pl. v, 3 text-figs.

Abstracts in Geol. Centralbl., XIII, 204; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 298; Rev. crit. Paléozool., XIII, 154; Sci. Progress, IV, 671.

——— 1909 C

On the nature of *Edestus* and related genera, with descriptions of one new genus and 3 new species.

Proc. U. S. Nat. Mus., XXXVII, 43-61, pls. xii-xv, 7 text-figures.

Abstracts in Science Progress, IV, 675-676; in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 329; Rev. crit. Paléozool., XIV, 16-18; Nature, LXXXII, 104.

——— 1909 D

Dr. Williston on "The Fossil Turtles of North America."

Science (n.s.), XXIX, 341-342.

——— 1909 E

The poses of *Diplodocus*.

Die Umschau, Frankfurt a. M., Oct. 2, 1909, 829, fig. 5.

Hay, O. P.—Continued 1909 F

On restoration of skeletons of fossil vertebrates.

Science (n.s.), xxx, 93-95.

—— 1909 G

The geological and geographical distribution of some Pleistocene mammals.

Science (n.s.), xxx, 890-893.

Abstract in Geol. Centralbl., xiv, 487.

—— 1910 A

Descriptions of eight new species of fossil turtles from west of the one-hundredth meridian.

Proc. U. S. Nat. Mus., xxxviii, 307-326, pls. x-xii, text-figs. 1-23.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, i, Ref., 318; Rev. crit. Paléozool., xiv, 233.

—— 1910 B

Where do the Lance Creek ["Ceratops"] beds belong, in the Cretaceous or in the Tertiary?

Proc. Indiana Acad. Sci., xxv, 277-303. Reprint, 1-27.

Abstract in Geol. Centralbl., xviii, 515.

—— 1910 C

On the manner of locomotion of the dinosaurs, especially *Diplodocus*, with remarks on the origin of the birds.

Proc. Wash. Acad. Sci., xii, 1-25, pl. i, 7 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, ii, Ref., 289-290; Geol. Centralbl., xv, 311-312; Sci. Progress, v, 679-680.

—— 1910 D

On the changes of climate following the disappearance of the Wisconsin ice sheet.

Die Verändungen des Klimas seit dem Maximum der letzten Eiszeit.

Internat. Geol. Congress, xi, Stockholm, 1910, 371-374.

—— 1911 A

A fossil specimen of the alligator snapper (*Macrochelys temminckii*) from Texas.

Proc. Amer. Philos. Soc., l, 452-455, pls. xviii, xix, 1 text-fig.

—— 1911 B

Further observations on the pose of the sauropodus dinosaurs.

Amer. Naturalist, xlv, 398-412.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, ii, Ref., 446; Nature, lxxxvii, 196.

Hay, O. P.—Continued 1912 A

On an important specimen of *Edestus;* with description of a new species, *Edestus mirus.*

Proc. U. S. Nat. Mus., xlii, 31-38, 2 plates.

Abstracts in Geol. Centralbl., xviii, 523-524; Sci. Progress, viii, 24; Rev. crit. Paléozool., xvii, 79; Nature, lxxxix, 430.

—— 1912 B

The recognition of Pleistocene faunas.

Smithson. Misc. Coll., lix, No. 20, 1-16, 10 figures.

Abstract in Geol. Centralbl., xix, 644-645.

—— 1912 C

American Permian vertebrates.

Amer. Naturalist, xlvi, 561-565.

A review of Williston, 1911 B.

—— 1912 D

The Pleistocene period [in Indiana] and its Vertebrata.

Geol. Surv. Ind., xxxvi, 538-784, pls. i-xxxi, text-figs. 1-76.

—— 1912 E

Symposium on ten years progress in vertebrate paleontology. Chelonia.

Bull. Geol. Soc. Amer., xxiii, 212-220.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Lull, Merriam, Dean, Eastman, Osborn, Williston and Sinclair.

—— 1913 A

Descriptions of two new species of ruminants from the Pleistocene of Iowa.

Proc. Biol. Soc. Wash., xxvi, 5-7, 1 text-fig.

—— 1913 B

Notes on some fossil horses, with descriptions of four new species.

Proc. U. S. Nat. Mus., xliv, 569-594, pls. lxix-lxxiii, 28 text-figures.

Abstracts in Geol. Centralbl., xx, 145; Rev. crit. Paléozool., xvii, 203.

—— 1913 C

The extinct bisons of North America; with description of one new species, *Bison regius.*

Proc. U. S. Nat. Mus., xlvi, 166-200, pls. viii-xix, 10 text-figs.

Notes in L'Anthrop., Paris, xxvi, 1915, 153-154; Sci. Progress, viii, 631. Abstracts in Neues Jahrb. Min. Geol. Pal., 1919, Ref., 220-222; Geol. Zentralbl., xxi, 37; xxiii, 350; Nature, xcii, 563.

Hay, O. P.—Continued 1913 D

Camels of the fossil genus *Camelops*.

Proc. U. S. Nat. Mus., XLVI, 267-277, pls. XXV, XXVI, 1 text-fig.

Abstracts in Sci. Progress, VIII, 633; Rev. crit. Paléozool., XIX, 10; Geol. Zentralbl., XXI, 36; Nature, XCII, 563.

——— 1913 E

Description of the skull of an extinct horse found in central Alaska.

Smithson. Misc. Coll., LXI, No. 2, 1-18, pls. i, ii, 8 text-figs.

Abstract in Geol. Centralbl., XX, 703.

——— 1914 A

The Pleistocene mammals of Iowa.

Iowa Geol. Surv., XXIII, 1-662, pls. i-lxxv, 142 text-figs.

Reviews by R. S. L(ull) in Amer. Jour. Sci. (4), XXXIX, 320-322; Geol. Mag. (6), III. 35.

——— 1915 A

Contributions to the knowledge of the mammals of the Pleistocene of North America.

Proc. U. S. Nat. Mus., XLVIII, 515-575, pls. XXX-XXXVII, 5 text-figs.

The description of *Equus francisi* was reprinted in The Veterinary Alumni Quarterly, [Columbus, Ohio], March 1916, 124-139, 2 figs.

Abstracts in Jour. Wash. Acad. Sci., V, 582-583; Nature, London, XCV, 298; Rev. crit. Paléozool., XXIII, 19-21; L'Anthropologie, XXIX, 115-117.

——— 1915 B

A contribution to the knowledge of the extinct sirenian *Desmostylus hesperus* Marsh.

Proc. U. S. Nat. Mus., XLIX, 381-397, pls. lvi-lviii.

Abstracts in Nature, XCVI, 152; in Neues Jahrb. Min. Geol. Pal., 1917, I, 106; Geol. Mag. (6), II, 567.

——— 1915 C

The extinct ground sloths of North America.

Science (n.s.), XLI, 878.

——— 1916 A

Investigation of the vertebrate paleontology of the Pleistocene epoch.

Publ. Carnegie Instn. Wash. Year Book No. 14, 386-387.

——— 1916 B

Exhibition of skull of walrus.

Science (n.s.), XLIII, 330.

Hay, O. P.—Continued 1916 C

Descriptions of some Floridian fossil vertebrates, belonging mostly to the Pleistocene.

Rep. Florida Geol. Surv., VIII, 39-76, pls. i-ix.

Abstract in Rev. crit. Paléozool., XXV, 11.

——— 1916 D

Descriptions of two extinct mammals of the order Xenarthra from the Pleistocene of Texas.

Proc. U. S. Nat. Mus., LI, 107-123, pls. iii-vii.

——— 1916 E

The Quaternary deposits at Vero, Florida, and the vertebrate remains contained therein.

Jour. Geol., XXV, 52-55.

Reprints of this paper were distributed a few days before Jan. 1, 1917.

Abstract in Geol. Zentralbl., XXX, 222-223.

——— 1916 F

A new Pleistocene sloth from Texas.

Jour. Wash. Acad., VI, 24.

——— 1917 A

A cervical vertebra of a deer from a deposit in Florida.

Science (n.s.), XLV, 72.

——— 1917 B

Descriptions of some fossil vertebrates found in Texas.

Bull. Univ. Texas, 1916, No. LXXI, 1-24, pls. i-iv. Not issued until after Jan. 1, 1917.

——— 1917 C

On the finding of supposed Pleistocene human remains at Vero, Florida.

Jour. Wash. Acad. Sci., VII, 358-359.

——— 1917 D

On a collection of fossil vertebrates made by Dr. F. W. Cragin in the Equus beds of Kansas.

Kan. Univ. Sci. Bull., X, 39-51, with pls. i-iii.

Abstract in Rev. crit. Paléozool., XXIV, 97-98.

——— 1917 E

Vertebrata mostly from stratum No. 3, at Vero, Florida, together with descriptions of new species.

Rep. Florida Geol. Surv., IX, 43-68, pl. iii, figs. 1-6.

Review in Science (n.s.), XLVII, 394-395.

Abstract in Rev. crit. Paléozool., XXV, 15.

Hay, O. P.—Continued 1917 F

Description of a new species of extinct horse, *Equus lambei*, from the Pleistocene of Yukon Territory.

Proc. U. S. Nat. Mus., LIII, 435-443, pls. lvi-lviii.

Abstract in Geol. Zentralbl., XXVII, 508.

—— 1917 G

Description of a new species of mastodon, *Gomphotherium elegans*, from the Pleistocene of Texas.

Proc. U. S. Nat. Mus., LIII, 219-221, pl. xxvi.

This paper was issued somewhat later than Hay, O. P., 1917 B.

Abstract in Geol. Zentralbl., XXVII, 508.

—— 1917 H

Dean and Eastman's Bibliography of Fishes.

Amer. Naturalist, LI, 383-384.

—— 1917 I

On species of *Bison* (Abstract).

Bull. Geol. Soc. Amer., XXVIII, 212-213.

—— 1918 A

A review of some papers on fossil man at Vero, Florida.

Science (n.s.), XLVII, 370-371.

—— 1918 B

Further consideration of the occurrence of human remains in the Pleistocene deposits at Vero, Florida.

Amer. Anthropologist, XX, 1-36, 1 map.

—— 1918 C

Quaternary vertebrates in southwestern Wisconsin.

U. S. Geol. Surv. Profess. Pap., CVI, 346-347.

—— 1918 D

Dr. Aleš Hrdlička and the Vero man.

Science (n.s.), XLVIII, 459-462.

—— 1919 A

Pleistocene geology and vertebrate paleontology of the Atlantic coast plain.

Publ. Carnegie Instn. Wash. Year Book No. 17 (1918), 311-312.

—— 1919 B

On some proboscideans of the State of New York.

Science (n.s.), XLIX, 377-379.

Hay, O. P.—Continued 1919 C

Description of some mammalian and fish remains from Florida, of probably Pleistocene age.

Proc. U. S. Nat. Mus., LVI, 103-112, pls. xxvi-xxviii.

Brief review in Rev. crit. Paléozool., XXIV, 140.

Abstract in Geol. Zentralbl., XXVII, 362.

—— 1919 D

On the relative ages of some Pleistocene deposits.

Amer. Jour. Sci. (4), XLVII, 361-375.

Abstract in Geol. Zentralbl., XXV, 269.

—— 1920 A

Report on work on Pleistocene paleontology.

Publ. Carnegie Instn. Wash. Year Book No. 18, 361-362.

—— 1920 B

Descriptions of some Pleistocene vertebrates found in the United States.

Proc. U. S. Nat. Mus., LVIII, 83-146, pls. iii-xi, 4 text-figs.

Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 96-98; Neues Jahrb. Min. Geol. Pal., 1923, I, 309.

Review in Rev. crit. Paléozool., XXVII, 14.

—— 1921 A

Descriptions of species of Pleistocene Vertebrata, types of specimens of most of which are preserved in the United States National Museum.

Proc. U. S. Nat. Mus., LIX, 599-642, with pls. cxvi-cxxiv.

Abstract in Rev. crit. Paléozool., XXVI, 133.

—— 1921 B

Report on investigation of work on the Pleistocene vertebrata.

Publ. Carnegie Instn. Wash. Year Book No. 19, for 1920, 402-404.

—— 1922 A

Report on work done on the Pleistocene epoch and its vertebrate animals.

Publ. Carnegie Instn. Wash. Year Bock No. 20, 445-446.

—— 1922 B

Description of a new fossil sea cow from Florida, *Metaxytherium floridanum*.

Proc. U. S. Nat. Mus., LXI, art. 17, 1-4, pl. i. Abstract in Rev. Geol. et Sci. conn., IV, 1923, 94. (Place of publication wrongly stated.)

Review in Rev. crit. Paléozool., XXVII, 12.

Hay, O. P.—Continued 1922 C

On the phylogeny of the shell of the Testudinata and the relationships of *Dermochelys*.

Bibl. Serv. Wistar Inst., card 1043 (abstract).

—— 1922 D

Observations on some extinct elephants.

1-19 pages, pls. i-iv; text-figs. 1-10.

Washington. Distributed by the author, June 12, 1922.

—— 1922 E

On the phylogeny of the shell of the Testudinata and the relationships of *Dermochelys*.

Jour. Morphol., XXXVI, 421-445, pls. i, ii, 1 text-fig.

—— 1922 F

Further observations on some extinct elephants.

Proc. Biol. Soc. Wash., XXXV, 97-102.

—— 1922 G

Note on *Desmostylus hesperus*.

Acta Zool., III, 392-393.

In Abel, O., 1922 E.

—— 1923 A

The Pleistocene of North America and its vertebrated animals from the States east of the Mississippi River and from the Canadian Provinces east of longitude 95°.

Publ. Carnegie Instn. Wash., No. 322, i-vii+1-499 pages, with 41 maps and 25 text-figs.

Noticed in Amer. Jour. Sci. (5), v, 424-425; Nature, CXII, 111.

—— 1923 B

Characteristics of sundry fossil vertebrates.

Pan-Amer. Geol., XXXIX, 101-120, pls. vii-ix, text-figs. 4, 5.

—— 1923 C

Description of remains of *Bison occidentalis* from central Minnesota.

Proc. U. S. Nat. Mus., LXIII, art. 5, 1-8, pls. i, ii.

Review in Rev. crit. Paléozool., XXVIII, 166, 1924.

Abstract in Nature, CXII, 67.

—— 1923 D

Oligocene sea turtles of South Carolina.

Pan-Amer. Geol., XL, 29-31, pls. ii, iii.

Hay, O. P.—Continued 1923 E

Report on work done on the Pleistocene epoch and its vertebrate fossils.

Publ. Carnegie Instn. Wash. Year Book No. 21, 395.

—— 1924 A

Description of some fossil vertebrates from the Upper Miocene of Texas.

Proc. Biol. Soc. Wash., XXXVII, 1-19, pls. i-vi, 1 text-fig.

—— 1924 B

On the geological age of the Walker Hotel swamp deposit, in Washington, D. C., and on the origin and the age of the coastal plain terraces in general.

Jour. Wash. Acad. Sci., XIV, 255-264.

—— 1924 C

Notes on the osteology and dentition of the genera *Desmostylus* and *Cornwallius*.

Proc. U. S. Nat. Mus., LXV, art. 8, 1-8, 2 pls., 2 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1925, I, 446.

—— 1924 D

The Pleistocene of the middle region of North America and its vertebrated animals.

Publ. Carnegie Instn. Wash. 322 A, i-vii+1-385 pages, 29 maps, 5 text-figs.

Remarks on in Amer. Jour. Sci. (5), IX, 83; Jour. Geol., XXXIII, 753.

Abstract in Geol. Zentralbl., XXXIII, 32.

—— 1924 E

On the status of privately issued papers on systematic zoology.

Proc. Biol. Soc. Wash., XXXVII, 109-112.

—— 1925 A

A further and detailed description of the type of *Elephas roosevelti* and descriptions of three referred specimens.

Proc. U. S. Nat. Mus., LXVI, art. 34, 1-6, pls. i-iv, 1 text-fig.

—— 1925 B

On remains of mastodons found in Texas, *Anancus brazosius* and *Gomphotherium cimarronis*.

Proc. U. S. Nat. Mus., LXVI, art. 35, 1-5, pls. 1-4, 9 text-figs.

—— 1925 C

Extinct proboscideans of Mexico.

Pan-Amer. Geol., XLIV, 21-37, pls. iii, iv.

—— 1925 D

On the correlation of certain Pleistocene deposits and their fossils.

Jour. Wash. Acad. Sci., XV. 239-246.

Hay, O. P.—Continued 1925 E
Review of Dr. Günther Schlesinger's paper on mastodons.
Jour. Wash. Acad. Sci., xv, 381-387.

—— 1926 A
Two new Pleistocene mastodons.
Jour. Wash. Acad. Sci., xvi, 35-41, pls. i, ii.

—— 1926 B
Description of remains of an elephant found at Port Williams, Washington.
Jour. Wash. Acad. Sci., xvi, 154-159, with plate.

—— 1926 C
A collection of Pleistocene vertebrates from southwestern Texas.
Proc. U. S. Nat. Mus., lxviii, art. 24, 1-18, pls. i-viii, 2 text-figs.

—— 1926 D
The geological age of Tuolumne Table Mountain.
Jour. Wash. Acad. Sci., xvi, 358-361.

—— 1926 E
On the geological age of Pleistocene vertebrates found at Vero and Melbourne, Florida.
Jour. Wash. Acad. Sci., xvi, 387-392.

—— 1926 F
Professor Osborn on the mammals and the birds of the California tar pools.
Science (n.s.), lxiv, 426-427.

—— 1927 A
On the type skull of *Equus laurentius* Hay.
Jour. Wash. Acad. Sci., xvii, 5-7.

—— 1927 B
The prong-horn antelope in Illinois.
Jour. Mamm., viii, 61-62.

—— 1927 C
A review of recent reports on investigations made in Florida on Pleistocene geology and palæontology.
Jour. Wash. Acad. Sci., xvii, 277-283.

—— 1927 D
The Pleistocene of the western region of North America and its vertebrated animals.
Publ. Carnegie Instn. Wash., 322 B, i-v+1-346 pages, pls. i-xii, 21 maps, 19 text-figs.
The citations from this volume are mostly made to the index.

Hay, O. P.—Continued 1927 E
Correlation on the basis of fossil vertebrates.
Geol. Soc. Amer. Preliminary list for 40th meet. Cleveland, 1927, 76-77.

—— 1928 A
Further consideration of the skull of *Chelys* and of the constitution of the armor of turtles in general.
Proc. U. S. Nat. Mus., lxxiii, art. 3, 1-12, 2 pls.

Hay, Robert 1885 A
Note on the fossil jaw of *Bison*, from the Pliocene of Norton County [Kansas].
Trans. Kansas Acad. Sci., ix, 98.
The jaw was found in the Equus beds.

—— 1890 A
A geological reconnaisance in southwestern Kansas.
Bull. U. S. Geol. Surv., lvii, 1-50, pls. i, ii, 21 text-figs.

—— 1896 A
The geology of the Fort Riley military reservation and vicinity, Kansas.
Bull. U. S. Geol. Surv., cxxxvii, 1-34, pls. i-vii, 4 text-figs.

Hay, W. P. 1916 A
Notes on the growth of the loggerhead turtle.
Jour. Wash. Acad. Sci., vi, 258.

Hayden, F. V. 1871 A
Preliminary report of the U. S. Geological Survey of Wyoming and portions of contiguous territories. (Being a second annual report of progress.)
Washington, 8vo., 1-188, illustrations.

—— 1872 A
Final report of the United States Geological Survey of Nebraska and portions of the adjacent Territories.
Washington, D. C., 1-264 pages, with maps and illustrations.

Hayden, Horace H. 1820 A
Geological essays; or an inquiry into some of the geological phenomena to be found in various parts of America and elsewhere.
Baltimore, 1820, i-viii+1-412 pages.

Hayek, Heinrich 1924 A
Über das Schicksal des Proatlas und über die Entwicklung der Kopfgelenke bei Reptilien und Vögeln.
Morphol. Jahrb., liii, 137-163, 2 pls.
The bibliography includes 25 titles.

Hayek, Heinz 1926 A

Ueber den Processus paramastoideus beim Menschen und bei Säugetieren und den Ponticulus lateralis atlantis.

Verh. Anat. Ges., xxxv, 176-179.

Hayes, C. W., and William **Kennedy** 1903 A

Oil fields of the Texas-Louisiana Gulf coastal plain.

Bull. U. S. Geol. Surv., ccxii, 1-174, maps and figures.

Hayes, Seth 1895 A

See Hay, O. P., 1902 A, 111. Abstract in Amer. Geol., xv, 272.

—— 1895 B

The Shaw mastodon. An examination and description of mastodon and accompanying mammalian remains found near Cincinnati, June 1894.

Rep. Ohio Acad. Sci., iii, 37-41, 1 plate.

Haymond, Rufus 1869 A

Geology of Franklin County [Indiana].

Geol. Surv. Ind., i, 175-235.

Haynes, Henry W. 1889 A

The prehistoric archæology of North America.

Narrative and critical history of North America. Edited by Justin Winsor. Boston and New York, 1889, 328-368 pages.

Heckel, Johann Jacob 1836 A

Über einige neue, oder nicht gehörig unterschiedene Cyprinen, nebst einer systematischen Darstellung der europäischen Gattungen dieser Gruppe.

Ann. Wien. Mus., Zool. Abh., i, 219-234, pls. xix-xxi.

—— 1850 B

Ueber das Wirbelsäulen-Ende bei Ganoiden und Teleostiern.

Sitz.-Ber. Akad. Wiss. Wien, v, 143-148.

—— 1851 A

Ueber die Ordnung der Chondrostei und die Gattungen *Amia, Cyclurus, Notœus.*

Sitz.-Ber. Akad. Wiss. Wien, vi, 219-224.

Heilmann, Gerhard 1913 A

Vor nuvaerende Viden om Fuglenes Afstamning. (What we know about the descent of birds.) Første Afsnit.

Dansk ornith. For. Tidsskr., vii, 1-71, 50 figs.

Heilmann, Gerhard—Continued 1913 B

Vor nuvaerende Viden om Fuglenes Afstamning. Andet Afsnit.

Dansk ornith. For. Tidsskr., viii, 1-92, figs. 51-109.

Review in Aquila, xxii, 1915, 394-396.

—— 1914 A

Same general titles as Heilmann, G., 1913 A.

Traek of Fosterudviklingen hos Krybdyr og Fugle. Tredje Afsnit.

Dansk ornith. For. Tidsskr., ix, 1-96, figs. 110-159.

—— 1915 A

Same general title as Heilmann, G., 1913 A. Fjerde Afsnit. Anatomisk-biologisk Sammenligning.

Dansk ornith. For. Tidsskr., ix, 92-160, figs. 160-186.

—— 1916 A

Same general title as Heilmann, G., 1913 A. Femte Afsnit. Forfuglen *Proavis.*

Dansk ornith. For. Tidsskr., x, 73-144, figs. 187-215.

—— 1916 B

Fuglenes Afstamning.

Kjöbenhaven, 1916, liii+398 pages, 215 figs.

This book, not seen by the present writer, is a collection of the parts 1-5 recorded under Heilmann, 1913 A, 1913 B, 1914 A, 1915 A, and 1916 A. For an abstract see Geol. Zentralbl., xxiii, 413.

—— 1926 A

The origin of birds.

8vo., London, i-iii+1-208 pages, 2 colored pls., 142 text-figs.

Bibliographies on pages 63, 98, 133, 201.

Heilprin, Angelo 1887 A

The geographical and geological distribution of animals.

International Scientific Series, New York and London. 8vo., i-xii+1-435 pages, with map.

—— 1888 A

Report of the curators.

Proc. Acad. Nat. Sci. Phila. for 1887, 411-416.

—— 1901 A

Fossils and their teachings.

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Amer. Jour. Sci. (1), xxv, 217-258.
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Report on the geology and agriculture of Mississippi.

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Washington, March 18, 1863.

Dear Sir: I have the pleasure of sending you by mail, on the part of the Author, my brother, a copy of his Report on the geology and agriculture of the State of Mississippi. The publication of this volume has been delayed until now by the disturbed state of political affairs. Yours very respectfully,

(Signed) J. E. Hilgard.

Dr. F. B. Meek, Albany.

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On the geology of lower Louisiana and the rock-salt deposit of Petite Anse.

Amer. Jour. Sci. (1), xlvii, 77-88.

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Variationen des Canidengebisses mit besonderer Berücksichtigung des Haushundes.
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The Newark system of the Pomperaug Valley, Connecticut; with a report on fossil wood from the Newark formation of South Britain.
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Notes on the genus *Menobranchus* and its natural affinities.
Ann. Mag. Nat. Hist. (3), XVIII, 363-375. Extracted from Archives Nederland, I, 305-321.

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Zur Entstehung des Tuberculum articulare beim Menschen.
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Versl. Med. Akad. Amsterdam (2), XIV, 52-65, with pl.

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Report on the section of chemistry and mineralogy.
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Hoffmann, K. 1923 A
Der Maxillar- und Bartelapparat bei *Silurus glanis.*
Anat. Anz., LVII, 113-122, 3 figs.
There are 9 titles in the bibliography.

Hoffmann, Ludwig 1912 A
Zur Kenntniss des Neurocraniums der Pristiden und Pristiophoriden.
Zool. Jahrb. Anat., XXXIII, 239-360, pls. xiii-xxiv, 8 text-figs.
Appended is a bibliography of 65 titles.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 72-76.

Hoffmann, Ralph 1927 A
The finding of Pleistocene material in an asphalt pit at Carpinteria, California.
Science (n.s.), LXVI, 155.

Hofmann, Kleophas 1923 A
Das Hyobranchialskelet von *Salamandra maculosa,* nebst Beiträgen zur Rückbildung des Kieferapparates.
Anat. Anz., LVI, 432-441, 4 figs.
The bibliography presents 10 titles.

Hofmann, Ottmar 1905 A
Das Munddach der Saurier.
Morphol. Jahrb., XXXIII, 3-38, pl. i, 9 text-figs.

Hogben, Lancelot T. 1919 A
The progressive reduction of the jugal in the Mammalia.
Proc. Zool. Soc. Lond., 1919, 71-78.

Hogg, John 1839 A
On the classification of the Amphibia.
Mag. Nat. Hist., III, 265-274; 367-378.

—— 1841 A
On the existence of branchiæ in the young Cæciliæ and on a modification and extension of the branchial classification of the Amphibia.
Ann. Nat. Hist., VII, 353-363.

Holden, F. Harvey 1917 A
Osteological relationships of three species of beavers.
Univ. Calif. Publ. Zool., XVII, 75-114, pls. v-xii, 18 text-figs.
The three species described are *Castor canadensis, C. fiber* and *C. subauratus.*

Holding, R. E. 1905 A
Remarks upon a series of the first-year antlers of certain deer.
Proc. Zool. Soc. Lond., 1905, II, 1-3, figs. A-E.

Holl, M. 1882 A

Ueber die richtige Deutung der Querforsätze der Lendenwirbel und die Entwicklung der Wirbelsäule der Menschen.

Sitz-Ber. Akad. Wiss. Wien, LXXX, 181-232, pls. i-iv.

Holland, W. J. 1899 A

The mastodon.

Pop. Sci., XXXIII, 233-234, 3 figs.

—— 1904 A

In memoriam. John Bell Hatcher.

Ann. Carnegie Mus., II, 597-604, pls. xvi-xx.

—— 1905 A

A new crocodile from the Jurassic of Wyoming.

Ann. Carnegie Mus., III, 431-434, pl. xvi, 1 text-fig.

Abstracts in Geol. Centralbl., VIII, 379; X, 371; Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 466.

—— 1905 B

The presentation of a reproduction of *Diplodocus carnegiei* to the trustees of the British Museum.

Ann. Carnegie Mus., III, 443-452, plate xvii.

—— 1905 C

The hyoid bone in *Mastodon americanus*.

Ann. Carnegie Mus., Pittsburgh, III, 464-467, 5 text-figs.

Abstract in Geol. Centralbl., VIII, 375.

—— 1905 D

Discovery of the skeleton of *Diplodocus carnegii* Hatcher.

Science (n.s.), XXI, 935.

—— 1905 E

The story of the *Diplodocus*.

Westminster Review, CLXIII, 683-692, with plate.

—— 1906 A

The osteology of *Diplodocus* Marsh.

Mem. Carnegie Mus., II, 225-264, pls. xxiii-xxx, 30 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 446; Geol. Centralbl., XI, 331; Nature, LXXIII, 541; Rev. crit. Paléozool., X, 141-142; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 163; Sci. Progress, I, 455.

—— 1908 A

A preliminary account of the Pleistocene fauna discovered in a cave opened at Frankstown, Pennsylvania, in April and May 1907.

Ann. Carnegie Mus., IV, 228-233.

Abstracts in Geol. Centralbl., XIII, 291; Rev. crit. Paléozool., XII, 233.

Holland, W. J.—Continued 1908 B

Editorial notes.

Ann. Carnegie Mus., IV, 159-161.

—— 1908 C

An undetermined element in the osteology of the Mosasauridæ.

Ann. Carnegie Mus., IV, 162-167, 5 text-figs.

Abstracts in Geol. Centralbl., XII, 598; Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 467.

—— 1908 D

Baptanodon not a "toothless" ichthyosaur.

Science (n.s.), XXVII, 191-192.

—— 1908 E

Dr. O. P. Hay on the skull of *Diplodocus*.

Science (n.s.), XXVIII, 644-645.

—— 1908 F

A new species of the genus *Moropus*.

Science (n.s.), XXVIII, 809-810, 1 text-fig.

Abstract in Rev. crit. Paléozool., 13, 80.

—— 1909 A

Editorial notes.

Ann. Carnegie Mus., V, 453-456.

—— 1909 B

Deinosuchus hatcheri, a new genus and species of crocodile from the Judith River beds of Montana.

Ann. Carnegie Mus., VI, 281-294, 16 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 145; Sci. Progress, IV, 668.

—— 1910 A

A review of some recent criticisms of the restorations of sauropod dinosaurs existing in the museums of the United States, with special reference to that of *Diplodocus carnegiei* in the Carnegie Museum.

Amer. Naturalist, XLIV, 259-283, pl. i, 20 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref. 323; Geol. Zentralbl., XVI, 216-217; Sci. Progress, V, 678-679; Rev. crit. Paléozool., XV, 23; Nature, LXXXIII, 381.

—— 1910 B

Note on *Diplomystus dentatus*.

Ann. Carnegie Mus., VII, 24, pl. vi.

—— 1911 A

Note on the finding of remains of dinosaurs.

Ann. Carnegie Mus., VIII, 2.

Holland, W. J.—Continued 1912 A
Symposium on ten years progress in vertebrate paleontology. Jurassic dinosaurs.
Bull. Geol. Soc. Amer., XXIII, 204-207.
For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Lull, Hay, Merriam, Dean, Eastman, Osborn, Williston and Sinclair.

——— 1912 B
A preliminary account of the Pleistocene fauna discovered in a cave opened at Frankstown, Pennsylvania, in April and May 1907.
Proc. internat. Zool. Congr., VII, Boston, 1907, 748-752.

——— 1914 A
[Remarks on zygomatic arches of *Promerycochœrus.*]
Ann. Carnegie Mus., IX, 197.

——— 1915 A
A skull of *Bison crassicornis.*
Ann. Carnegie Mus., IX, 225, pl. xliii.
This specimen appears to belong to *Bison occidentalis.*
Abstract in Geol. Zentralbl., XXIX, 157.

——— 1915 B
Heads and tails; a few notes relating to the structure of the sauropod dinosaurs.
Ann. Carnegie Mus., IX, 273-278, pl. lix.
Abstract in Geol. Zentralbl., XXIX, 189.

——— 1915 C
Heads and tails; a few notes relating to sauropod dinosaurs.
Bull. Geol. Soc. Amer., XXVI, 153 (abstract).

——— 1916 A
A new species of *Apatosaurus.*
Ann. Carnegie Mus., X, 143-145.
Abstract in Geol. Zentralbl., XXIX, 187.

——— 1916 B
Notice of the death of William H. Reed.
Ann. Carnegie Mus., X, 2-3.

——— 1916 C
[Note on the discovery of a skull of *Diplodocus.*]
Ann. Carnegie Mus., X, 3.

——— 1916 D
Skeletons of *Diplodocus* and *Apatosaurus* in the Carnegie Museum (abstract).
Bull. Geol. Soc. Amer., XXVII, 153.

Holland, W. J.—Continued 1918 A
Some observations on the osteology of *Diplodocus.*
Bull. Geol. Soc. Amer., XXIX, 130 (abstract).

——— 1919 A
Report on section of paleontology.
Rep. Carnegie Mus., for year 1919, 37-39.

——— 1923 A
The vertebral formula in the Sauropoda.
Amer. Naturalist, LVII, 477-480.

——— 1924 A
Description of the type of *Uintasaurus douglassi* Holland.
Ann. Carnegie Mus., XV, 119-138, pls. x-xiv, 7 text-figs.

——— 1924 B
The skull of *Diplodocus.*
Mem. Carnegie Mus., IX, 379-403, pls. xl-xliii, 11 text-figs.
Abstract in Neues Jahrb. Min. Geol. Pal., 1925, I, 294.

———, and O. A. **Peterson** 1913 A
The osteology of the Chalicotheroidea; with special reference to a mounted skeleton of *Moropus elatus* Marsh, now installed in the Carnegie Museum.
Mem. Carnegie Mus., III, 189-406, pls. xlviii-lxxvii, 115 text-figs.
Reviewed in Science (n.s.), XL, 1914, 209-210; Jour. Geol., XXII, 818.

Hollard, Henri 1850 A
Coup d'oeil sur l'ordre des Ganoides et recherches sur les caractères des Lophobranches, pour déterminer leurs véritables affinitiés zoologiques.
C. R. Acad. Sci. Paris, XXXI, 564-566.

——— 1857 B
Monographie de la famille des ostracionides.
Ann. Sci. Nat. (4), VII, 121-170, pl. xiii.

——— 1863 A
De la signification anatomique de l'appareil operculaire des poissons et de quelques autres parties de leur système osseux.
C. R. Acad. Sci. Paris, LVI, 38-39.

——— 1863 B
De la distribution des pièces qui composent l'arc suspenseur de la mâchoire inférieure chez les poissons osseux, et de leur signification anatomique.
C. R. Acad. Sci., Paris, LVI, 633-634.

Hollard, Henri—Continued 1864 A

Recherches sur la signification homologique de quelques pièces faciales des poissons osseux.

Ann. Sci. nat. (5), I, 5-19, pl. i.

—— 1864 B

De la signification anatomique de l'appareil operculaire des poissons.

Ann. Sci. nat. (5), I, 241-256, pl. x.

—— 1864 C

Du temporal et des pièces qui en représentent les éléments dans la série des animaux vertébrés.

Ann. Sci. nat. (5), I, 359-376, pl. xiii.

Hollick, Arthur 1901 A

Discovery of a mastodon's tooth and the remains of a boreal vegetation in a swamp on Staten Island, N. Y.

Ann. N. Y. Acad. Sci., XIV, 67-68.

Holliger, Charles Daniel 1916 A

Anatomical adaptions in the thoracic limb of the California pocket gopher and other rodents.

Univ. Calif. Publ. Zool., XIII, 447-494, pls. xxxviii-xxxix, 20 text-figs.

The bibliography presents 31 titles.

Hollister, Ned 1911 A

A systematic synopsis of the muskrats.

N. A. Fauna, No. 32, 1-38, pls. i-vi.

Abstract in Nature, LXXXVII, 18.

—— 1911 B

Remarks on the long-tailed shrews of the eastern United States, with description of a new species.

Proc. U. S. Nat. Mus., XL, 377-381.

—— 1911 C

The generic name of the muskrat.

Proc. Biol. Soc. Wash., XXIV, 13-14.

Accepts the name *Ondatra*.

—— 1912 A

New mammals from Canada, Alaska and Kamchatka.

Smithson. Misc. Coll., LVI, No. 35, 1-8, pls. i-iii.

Presents measurements of skulls and teeth of several species.

—— 1913 A

A synopsis of the American minks.

Proc. U. S. Nat. Mus., XLIV, 471-480.

—— 1915 A

The genera and subgenera of raccoons and their allies.

Proc. U. S. Nat. Mus., XLIX, 143-150, pls. xxxviii, xxxix.

Hollister, Ned—Continued 1916 A

A systematic account of the prairie-dogs.

N. A. Fauna No. 40, 1-37, pls. i-vi, 2 text-figs.

—— 1922 A

Recent literature.

Jour. Mamm., III, 270-273.

Holmes, Francis S. 1856 A

Contributions to the natural history of the American devil-fish, with descriptions of a new genus from the harbour of Charleston, South Carolina.

Proc. Elliott Soc. Nat. Hist., 1856, 39-46, pl. iii.

—— 1860 A

Post-pleiocene fossils of South Carolina.

4to., i-xii+i-vi+1-122 pages, pls. i-xxviii.

Parts 1-5 (pp. 1-64) were published in 1858; parts 6-10 (pp. 68-98), in 1859; parts 11-15 (pp. 99-122), in 1860. Pages i-xii are occupied by an "Introduction" by F. S. Holmes; pages 99-122, pls. xv-xviii, by Joseph Leidy's "Description of vertebrate fossils."

—— 1870 A

Phosphate rocks of South Carolina and the "Great Carolina marl bed."

Charleston. 8vo., pages 1-87, with 5 pls.

Holmes, William Henry 1901 A

Review of the evidence relating to auriferous gravel man in California.

Rep. Smithson. Instn. for 1899, 419-472, pls. i-xvi, 5 text-figs.

—— 1902 A

Anthropological studies in California.

Rep. U. S. Nat. Mus. for 1900, 155-185, 50 plates.

—— 1903 A

Flint implements and fossil remains from a sulphur spring at Afton, Indian Territory.

Rep. U. S. Nat. Mus. for 1901, 237-252, pls. i-xxvi.

This paper, in practically the same form, was published in 1902 in the American Anthropologist, IV, 108-128, pls. xi, xii, 1 text-fig.

Abstract in Globus, LXXXI, 1902, 101-102.

—— 1903 B

Fossil human remains found near Lansing, Kansas.

Rep. Smithson. Instn. for 1902, 455-462, pls. i-iii, 2 text-figs.

—— 1918 A

On the antiquity of man in America.

Science (n.s.), XLVII, 561-562.

Holmes, William Henry—Cont'd 1925 A

The antiquity phantom in American archæology.

Science (n.s.), LXII, 256-258.

Holzinger, John M. 1885 A

Fossil elephant in Winona County [Minnesota].

Rep. Geol. Nat. Hist. Surv. Minn., XIII, 147.

Letter to Prof. N. H. Winchell.

Hommes, J. H. 1924 A

On the development of the clavicula and the sternum in birds and mammals.

Tijdschr. Nederl. Dierk. Vereen. (2), XIX, Afl. 1, 10-51, pls. i-iii.

The bibliography occupies pages 43-46.

Honeyman, David 1888 A

Nova Scotian superficial geology.

Proc. Nova Scot. Inst., VII, 131-141.

——— 1890 A

Glacial geology of Cape Breton.

Proc. Nova Scot. Inst., VII, 337-344.

Honigmann, Hans Leo 1913 A

Bemerkungen zur Synonymie und Systematik der Leporiden und Beschriebung eines neuen chinesischen Kaninchens.

Sitz.-Ber. Ges. naturf. Freunde Berlin, 1913, 293-297.

Appended is a bibliography of 13 titles.

——— 1915 A

Das Primordialkranium von *Megaptera nodosa* Bonnat.

Anat. Anz., XLVIII, 113-127, 3 figs.

Hooley, Reginald Walter 1907 A

On the skull and greater portion of the skeleton of *Goniopholis crassidens* from the Wealden shales of Atherfield (Isle of Wight).

Quart. Jour. Geol. Soc., LXIII, 50-63, pls. ii-iv.

Noted by Lydekker, Sci. Progress, II, 516; by Huene, Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 466; by Sauvage in Rev. crit. Paléozool., XI, 75.

——— 1912 A

On the discovery of remains of *Iguanodon mantelli* in the Wealden beds of Brighstone Bay, Isle of Wight.

Geol. Mag. (5), IX, 444-449.

Abstract in Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 266.

Hooley, R. W.—Continued 1913 A

On the skeleton of *Ornithodesmus latidens;* an ornithosaur from the Wealden shales of Atherfield (Isle of Wight).

Quart. Jour. Geol. Soc., LXIX, 372-422, pls. xxxvi-xl.

Reviewed in Neues Jahrb. Min. Geol. Pal., 1915, II, Ref., 403-405. Abstracts in Sci. Progress, VIII, 638-639; Jour. Geol. XXI, 754-756; Geol. Mag. (5), X, 570.

——— 1914 A

On the ornithosaurian genus *Ornithocheirus,* with a review of the specimens from the Cambridge greensand in the Sedgwick Museum, Cambridge.

Ann. Mag. Nat. Hist. (8), XIII, 530-557, pl. xxii.

Reviewed in Neues Jahrb. Min. Geol. Pal., 1915, II, Ref., 405-406.

——— 1917 A

Integument of *Iguanodon bernissartensis* and *Morosaurus becklesii.*

Geol. Mag. (6), IV, 148-150, pl. x.

——— 1925 A

On the skeleton of *Iguanodon atherfieldensis* sp. nov.

Quart. Jour. Geol. Soc., LXXXI, 1-60, pls. i, ii, 10 text-figs.

References to the literature in foot-notes.

Hopewell-Smith, A., and H. W. Marett **Tims** 1911 A

Tooth-germs in the wallaby, *Macropus billardieri.*

Proc. Zool. Soc. Lond., 1911, 926-942, pl. xlvii, text-figs. 181-189.

Hopkins, F. V. 1870 A

First Annual Report of the Louisiana Geological Survey, 1869.

Rep. Louisiana Sem., I, 1870, 77-109.

——— 1871 A

Second annual Report of the Geological Survey of Louisiana to the General Assembly.

Rep. Louisiana Univ., II, 1870, 1-35.

——— 1872 A

Third Annual Report of the Louisiana Geological Survey.

Rep. Lousiana Univ., III. 163-206.

Hoppe, Richard 1894 A

Untersuchungen über den Kauapparat des Cyprinoiden *Leuciscus rutilus.*

Inaugural dissertation, Leipzig, pages 1-36, 1 pl.

The bibliography presents titles of 28 works.

Hora, Sunder Lal 1922 A

The homology of the weberian ossicles.

Jour. Asiat. Soc. Bengal (n.s.), XVIII, 1-4, with 2 figs.

Hornaday, William T. 1889 A

The extermination of the American bison, with a sketch of its discovery and life history.

Rep. U. S. Nat. Mus., 1886-87, 369-548, pls. i-xxii, and a large map showing distribution and stages of extermination.

—— 1901 A

Notes on the mountain sheep of North America, with a description of a new species.

Rep. N. Y. Zool. Soc., v, 77-122, with 17 illustrations and a map of distribution.

—— 1911 A

The musk-ox in Alaska.

Bull. N. Y. Zool. Soc., XLV, 754.

Houssay, Frederic 1909 A

Carènes et poissons. Stabilisation par les nageoires.

Rev. gen. Sci. Paris, XX, 617-624.

—— 1909 B

Nouvelles expériences sur la forme et la stabilité des poissons.

Rev. gen. Sci. Paris, XX, 943-948, 6 text-figs.

—— 1909 C

Sur les conditions hydrodynamiques de la forme chez les poissons.

C. R. Acad. Sci. Paris, CXLVIII, 1076-1078.

—— 1910 A

L'asymétrie du crâne chez les Cétacés et ses rapports avec la loi de l'action et de la réaction.

Anat. Anz., XXXVI, 12-17, 1 text-fig.

——, and A. **Magnan** 1912 A

L'envergure et la queue chez les oiseaux.

C. R. Acad. Sci. Paris, CLIV, 39-41, 1 fig.

Hovey, E. O. 1908 A

The Chester, New York, mastodon.

Ann. N. Y. Acad. Sci., XVIII, 147, pl. v.

Presents a facsimile of a note and a drawing made by Dr. P. S. Townsend, in 1817, on a mastodon found at Chester, New York.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 129; Rev. crit. Paléozool., XII, 274.

Hovey, Horace C. 1891 A

The latest facts about the megalonyx.

Scient. Amer., LXV, 161.

Hovey, Horace C.—Continued 1900 B

Facts about the megalonyx.

Scient. Amer. Suppl., L, 20839.

Howard, Hildgarde 1927 A

A review of the fossil bird *Parapavo californicus* (Miller), from the Pleistocene asphalt beds of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., XVII, 1-30, pls. i-xiii.

Howell, Alfred Brazier 1924 A

Individual and age variations in *Microtus montanus yosemite*.

Jour. Agric. Res., XXVIII, 977-1016, pl. i, 25 text-figs.

—— 1926 A

The anatomy of the wood rat. Comparative anatomy of the subgenera of the American wood rat (genus *Neotoma*).

8vo., i-x+1-225 pages, 37 figs.

The bibliography contains 37 titles.

Pages 110-172 are devoted to the osteology.

—— 1927 A

Contribution to the anatomy of the Chinese finless porpoise *Neomeris phocænoides*.

Proc. U. S. Nat. Mus., LXX, art. 13, 1-43, 14 figs.

There is a bibliography of 15 titles.

Howell, Arthur Holmes 1901 A

Revision of the skunks of the genus *Chincha*.

N. A. Fauna No. XX, 1-62, pls. i-viii.

The writer adopted *Chincha* in place of *Mephitis* for the skunks here described.

—— 1902 A

The generic names of the North American skunks.

Proc. Biol. Soc. Wash., XV, 1-9, pl. i.

The author adopted the name *Chinca*, to replace *Mephitis*.

—— 1906 A

Revision of the skunks of the genus *Spilogale*.

N. A. Fauna No. XXVI, 1-55, pls. i-x.

—— 1914 A

Revision of the American harvest mice (Genus *Reithrodontomys*).

N. A. Fauna No. XXXVI, 1-97, pls. i-vii, 6 text-figs.

—— 1915 A

Revision of the American marmots.

N. A. Fauna No. XXXVII, 1-80, pls. i-xv, 3 text-figs.

Howell, Arthur Holmes—Cont'd 1918 A
Revision of the American flying squirrels.
N. A. Fauna, No. XLIV, 1-64, pls. i-vii, 4 text-figs.

—— 1924 A
Revision of the American pikas (Genus *Ochotona*).
N. A. Fauna, No. XLVII, 1-57, 6 pls., 4 text-figs.

Howell, B. F. 1926 A
Problematical fossil, possibly a fish plate, from the Cambrian *Paradoxides* beds of northern Vermont.
Bull. Geol. Soc. Amer., XXXVII, 236 (Abstract).

Howes, G. B. 1891 A
On the probable existence of a Jacobson's organ among the Crocodilia, with observations upon the skeleton of that organ in the Mammalia, and upon the basi-mandibular elements in the Vertebrata.
Proc. Zool. Soc. Lond., 1891, 148-159, pl. xiv.

—— 1893 B
Notes on the variation and development of the vertebral column and limb-skeleton of the Amphibia.
Proc. Zool. Soc. Lond., 1893, 268-278, 15 text-figs.

—— 1893 C
On the coracoid of the terrestrial Vertebrata.
Proc. Zool. Soc. Lond., 1893, 585-592, 2 text-figs.

—— 1894 A
The present outlook of vertebrate morphology.
Sci. Progress, I, 73-90.
The literature referred to occupies pages 89-90.

—— 1895 A
Skull of a rabbit destitute of the second pair of upper incisors.
Proc. Zool. Soc. Lond., 1895, 521-522.

—— 1895 B
On the mammalian hyoid.
Rep. Brit. Assoc. Adv. Sci., LXV, Ipswich, 1895, 736. (A brief abstract.)

—— 1902 A
The morphological method and progress.
Nature, LXVI, 522-530.
Also in Rep. Brit. Assc. Adv. Sci., LXXII, Belfast, 1902 (1903), 618-638.

Howes, G. B.—Continued 1903 A
The brain of the Archæoceti.
Proc. Roy. Soc. Lond., LXXI, 322-330, 4 figs.

—— and J. **Harrison** 1893 A
On the skeleton and teeth of the Australian dugong.
Rep. Brit. Assoc. Adv. Sci., LXII, Edinburg, 790.

—— and H. H. **Swinnerton** 1901 A
On the development of the skeleton of the tuatara, *Sphenodon punctatus*, with remarks on the egg, on the hatching, and on the hatched young.
Trans. Zool. Soc. Lond., XVI, 1-86, pls. i-vi, 18 text-figs.
There is appended a bibliography of 68 titles.

Howorth, Henry Hoyle 1878 A
On the extinction of the mammoth in Siberia.
Nature, XVIII, 483.

—— 1887 A
The mammoth and the flood; an attempt to confront the theory of uniformity with the facts of recent geology.
8vo., London, i-xxxii+1-464 pages.
For critique see Nature, XXXVII, 1887, 123-125; Replies by Howorth in same volume, 200-201, 295.

—— 1893 B
Notes on the occurrence of mammoth-remains in the Yukon district of Canada and in Alaska.
Nature, XLIX, 94.

—— 1905 A
Ice or water. Another appeal to induction from the scholastic methods of modern geology. In three volumes.
Vol. I, i-lvi+1-536 pages. Vol. II, i-viii+1-498 pages.
Only two volumes have been published.

Hoyer, H., and J. **Babik** 1924 A
Über Zähne von Säugetieren mit an der Krone offenen Pulpahöhlen.
Bull. Acad. Sci. Cracovie, 1924 (1925), 445-460, pl. xxxiii.
The bibliography comprises 13 titles.

Hrdlička, Aleš 1903 A
Divisions of the parietal bone in man and other mammals.
Bull. Amer. Mus. Nat. Hist., XIX, 231-386.
The bibliography presents 74 titles.

Hrdlička, Aleš—Continued 1907 A

Skeletal remains suggesting or attributed to early man in North America.

Bur. Amer. Ethnol. Bull., XXXIII, 1-113, pls. i-xxi, 16 text-figs.

Contains mention of some extinct mammals.

—— 1916 A

Preliminary report on finds of supposedly ancient human remains at Vero, Florida.

Jour. Geol., XXV, 43-51, 2 text-figs.

Reprints of this paper were distributed a few days before Jan. 1, 1917.

—— 1918 A

Recent discoveries attributed to early man in America.

Bur. Amer. Ethnol. Bull., LXVI, 1-67, pls. i-xiv, 8 text-figs.

Contains lists of fossil vertebrates found at Vero, Florida, taken from Sellard's papers.

—— 1920 A

Shovel-shaped teeth.

Amer. Jour. Phys. Anthrop., III, 429-465, 6 pls.

—— 1921 A

Further studies of tooth morphology.

Amer. Jour. Phys. Anthrop., IV, 141-176, 6 pls.

—— 1924 A

New data on the teeth of early man and certain fossil European apes.

Amer. Jour. Phys. Anthrop., VII, 109-132, 1 pl.

—— 1926 A

The race and the antiquity of the American Indian.

Scient. Amer., July, 1926, 7-9, 6 ills.

Huard, V. A. 1908 A

Capture d'un morse.

Naturaliste canad., XXXV, 49-51.

Hubbard, Bela 1841 A

Report of B. Hubbard, Assistant Geologist.

Rep. State Geologist Mich., IV.

Also in documents accompanying the journal of the House of Representatives of the State of Michigan at the annual session of 1841, vol. I, 552-578.

Hubbard, O. P. 1885 A

[Mastodon at Bristol, Conn.]

Trans. N. Y. Acad. Sci., V, 14-15. (The bare statement.)

—— 1887 A

Skeleton of whale found near Quebec.

Amer. Jour. Sci. (3), XXXIII, 242.

A reference to "Kalm's Travels in N. A."

Hubbs, Carl L. 1919 A

The Amphibioidei, a group of fishes proposed to include the Crossopterygii and the Dipneusti.

Science (n.s.), XLIX, 569-570.

—— 1919 B

A comparative study of the bones forming the opercular series of fishes.

Jour. Morphol., XXXIII, 61-71.

—— 1922 A

Variations in the number of vertebræ and other meristic characters of fishes correlated with the temperature of water during development.

Amer. Naturalist, LVI, 360-372, 7 figs.

14 titles are presented in the bibliography.

—— 1923 A

Seasonal variation in the number of vertebræ of fishes.

Pap. Mich. Acad. Sci. Arts, II, 207-214, 1 fig.

—— 1924 A

Recent contributions to our knowledge of the fossil fishes of California.

Science (n.s.), LX, 177-179.

A bibliography of 12 titles.

—— 1926 A

The structural consequences of modifications of the developmental rate in fishes, considered in reference to certain problems of evolution.

Amer. Naturalist, LX, 57-81.

The bibliography contains 68 titles.

Huber, Oscar 1901 A

Die Kopulationsglieder der Selachier.

Zeitschr. wiss. Zool., LXX, 593-674, pls. xxvii, xxviii, 12 text-figs.

The bibliography embraces 26 titles.

Hubrecht, A. A. W. 1897 A

The descent of the Primates.

New York, Charles Scribner's Sons, 1897, pages 1-41, with 7 figs.

—— 1908 A

Early ontogenetic phenomena in mammals and their bearing on our interpretation of the phylogeny of the vertebrates.

Quart. Jour. Micr. Sci. (n.s.), LIII, 1-181, 160 illustrations.

Pages 171-181 are occupied by the extensive bibliography.

Abstract in Nature, LXXIX, 228.

Hue, Edmond 1907 A

Musée ostéologique. Étude de la faune quaternaire. Ostéometrie des mammifères.

8vo., i-xix+1-50 pages, 186 plates containing 2187 figures.

Abstract in Geol. Centralbl., XI, 171.

Huene, Friedrich 1900 A

Devonische Fischreste aus der Eifel.

Neues Jahrb. Min. Geol. Pal., Beil.-Bd. I, 64-66, 2 text-figs.

—— 1901 A

Der vermuthliche Hautpanzer des *Compsognathus longipes* Wagn.

Neues Jahrb. Min. Geol. Pal., I, 157-160, pl. vii, 1 text-fig.

Abstract in Geol. Centralbl., III, 442, 1903.

—— 1901 B

Vorläufiger Bericht über die trias sischen Dinosaurier des europäischen Continents.

Neues Jahrb. Min. Geol. Pal., II, 89-104, pls. iii, iv, 6 text-figs.

—— 1902 A

Uebersicht über die Reptilien der Trias.

Geol. Pal. Abh. Jena. (N.F.), VI, pp. 1-84, pls. i-ix, 78 text-figs.

Abstracts in Geol. Centralbl., V, 724; Rev. crit. Paléozool., VII, 80-82; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 92.

—— 1903 A

Abstract of F. Bauer: Osteologische Notizen über Ichthyosaurier (Bauer, F., 1900 A).

Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 441-442.

—— 1905 A

Pelycosaurier im deutschen Muschelkalk.

Neues Jahrb. Min., Geol. Pal., Beil.-Bd. XX, 321-353, pls. v-vii, 47 text-figs.

Abstracts in Geol. Centralbl., VIII, 697-698; Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 165.

—— 1905 B

Über die Trias-Dinosaurier Europas.

Zeitschr. deutsch. Geol. Ges., LVII, Monatsb., 345-349.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 159.

—— 1906 A

Ueber das Hinterhaupt von *Megalosaurus bucklandi* aus Stonesfield.

Neues Jahrb. Min. Geol. Pal., 1906, I, 1-12, pl. i, 4 text-figs.

Abstracts in Geol. Centralbl., XV, 722; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 162.

Huene, Friedrich—Continued 1906 B

Ueber die Dinosaurier der aussereuropäischen Trias.

Geol. Pal., Abh. Jena, (N.F.), VIII (XII); 97-156, pls. viii-xxiii (Heft 2, 1-60, pls. i-xvi), 102 text-figs.

The bibliography includes 37 titles.

Abstracts in Geol. Centralbl., XII, 150-151; Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 295; Rev. crit. Paléozool., XII, 273; Amer. Jour. Sci. (4), XXV, 86-87.

—— 1906 C

Ueber die Foramina der Carotis interna und des Hypoglossus bei einigen Reptilien.

Centralbl. Min. Geol. Pal., 336-338.

Abstract in Geol. Centralbl., VIII, 697.

—— 1907 A

Skeletsystem. Paläontologisches.

Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 150-167.

The bibliography (pages 150-157) presents 148 titles.

—— 1908 A

Neue and verkannte Pelycosaurier-Reste aus Europa.

Centralbl. Min. Geol. Pal., 1908, 431-434.

Abstract in Geol. Centralbl., XII, 151.

—— 1908 B

Die Dinosaurier der europäischen Triasformation mit Berücksichtigung der aussereuropäischen Vorkommnisse.

Geol. Pal. Abh., Jena, Suppl.-Band I, i-xii+1-419 pages, atlas of 111 pls., 351 text-figs.

Pages 1-64 of this work were issued in 1907. Pages 409-418 are occupied by a bibliography of the Dinosauria.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 286-292; Rev. crit. Paléozool., XV, 205-206; Geol. Zentralbl., XII, 222; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 160; Sci. Progress, II, 514; III, 459.

—— 1908 C

On the age of the reptile faunas contained in the Magnesian conglomerate at Bristol and in the Elgin Sandstone.

Geol. Mag. (5), V, 99-100.

—— 1908 D

Zur Beurteilung der Sauropoden.

Zeitschr. deutsch. Geol. Ges., LX, Monatsb., 294-297.

Abstracts in Geol. Centralbl., XIV, 57; Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 295.

Huene, Friedrich—Continued 1908 E

Ein Beitrag zur Beurteilung der Sacralrippen.

Anat. Anz., XXXIII, 378-381.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 296; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 94.

——— 1908 F

Beiträge zur Lösung der Praepubisfrage bei Dinosaurien und anderen Reptilien.

Anat. Anz., XXXIII, 401-405.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 297; Sci. Progress, V, 680; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 120.

——— 1908 G

On phytosaurian remains from the Magnesian conglomerate of Bristol (*Rileya platyodon*).

Ann. Mag. Nat. Hist. (8), I, 228-230.

Abstract in Geol. Centralbl., XI, 473, 604.

——— 1908 H

Skeletsystem. Paläontologisches.

Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 156-175.

On pages 156-175 are listed the titles of papers cited.

——— 1909 A

Review of Ch. W. Gilmore: The mounted skeleton of *Triceratops prorsus*.

Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 131.

——— 1909 B

Skizze zu einer Systematik und Stammesgeschichte der Dinosaurier.

Centralbl. Min. Geol. Pal., 1909, 12-22.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 158.

——— 1909 C

Ein primitiver Dinosaurier aus der mittleren Trias von Elgin.

Geol. Pal. Abh. Jena. (N.F.), VIII (XII), 317-322, pl. 1 (xliii), 2 text-figs.

Brief note on, in Neues Jahrb. Min. Geol. Pal., 1911, I, 145.

Abstract in Sci. Progress, V, 681.

——— 1909 D

Neubeschreibung des permischen Stegocephalen *Dasyceps bucklandi* (Lloyd) aus Kenilworth.

Geol. Pal. Abh. Jena (N.F.), VIII (XII), 323-328, pls. i, ii (xliv, xlv), 14 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 471.

Huene, Friedrich—Continued 1909 E

Review of B. Brown: The Ancylosauridæ, a new family of armored dinosaurs from the Upper Cretaceous (Brown, B., 1908 B).

Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 440-441.

——— 1909 F

Vorläufige Mitteilung über einen neuen *Phytosaurus* Schädel aus dem Schwäbischen Keuper.

Centralbl. Min. Geol. Pal., 1909, 583-592, 7 figs.

Abstract in Sci. Progress, V, 683.

——— 1910 A

Über den ältesten Rest von *Omosaurus* (*Dacentrurus*) im englischen Dogger.

Neues Jahrb. Min. Geol. Pal., 1910, I, 75-78, pl. vii, 1 text-fig.

——— 1910 B

Über einen echten Rhynchocephalen aus der Trias von Elgin, *Brachyrhinodon taylori*.

Neues Jahrb. Min. Geol. Pal., 1910, II, 29-62, 28 text-figs.

Abstract in Sci. Progress, V, 683.

——— 1910 C

Review of O. P. Hay: Descriptions of two new genera and two new species of fossil turtles (Hay, O. P., 1906 B).

Neues Jahrb. Min. Geol. Pal., 1910, II, 302.

——— 1910 D

Ein ganzes *Tylosaurus*-Skelett.

Geol. Pal. Abh., Jena (N.F.), VIII (XII), 297-314, pls. xli, xlii (Heft VI, 1-22, pls. i, ii), 18 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 146; Geol. Centralbl., XV, 126-127; Sci. Progress, V, 684; Rev. crit. Paléozool., XV, 208.

——— 1910 E

Ein primitiver Dinosaurier aus der mittleren Trias von Elgin.

Geol. Pal. Abh., Jena (N.F.), VIII (XII), 315-322, pls. xlii (Heft VI, 1-30, pl. i), 2 text-figs.).

Abstract in Geol. Centralbl., XV, 62-63.

——— 1910 F

Skeletsystem. Paläontologisches.

Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 147-163.

On pages 147-156 are listed 205 titles, abstracts of many of which are furnished on succeeding pages.

Huene, Friedrich—Continued 1911 A

Kurze Mitteilung über Perm, Trias und Jura in New Mexico.

Neues Jahrb. Min. Geol. Pal., Beil.-Bd. XXXII, 730-739, pl. xxxii, 2 text-figs.

—— 1911 B

Über einen *Platecarpus* in Tübingen.

Neues Jahrb. Min. Geol. Pal., 1911, II, 48-50, pl. iii.

Abstracts in Geol. Centralbl., XVII, 335; Sci. Progress, VI, 576.

—— 1911 C

Beiträge zur Kenntnis des Ceratopsidenschädels.

Neues Jahrb. Min. Geol. Pal., 1911, II, 146-162, 10 text-figs.

Abstracts in Geol. Centralbl., XVIII, 330; Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 140-141; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 208.

—— 1911 D

Ueber *Erythrosuchus*, Vertreter der neuen Reptil-Ordnung *Pelycosima*.

Geol. Pal. Abh. Jena (N.F.), X, 1-60, pls. i-xii, 60 text-figs.

Abstract in Geol. Centralbl., XVI, 714-715; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 209. Review in Jour. Geol., XIX, 661-664.

—— 1911 E

Beiträge zur Kenntnis und Beurteilung der Parasuchier.

Geol. Pal. Abh. Jena (N.F.), X, 65-121, pls. i-viii, 36 text-figs.

Abstracts in Rev. crit. Paléozool., XV, 208; Geol. Centralbl., XVI, 714; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 209.

—— 1911 F

Ueber die Procolophoniden mit einer neuen Form aus dem Buntsandstein.

Centralbl. Min. Geol. Pal., 1911, 78-83, 5 figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 208.

—— 1911 G

Skeletsystem. Paläontologisches.

Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 145, 161.

—— 1912 A

Die Cotylosaurier der Trias.

Palaeontogr., LIX, 69-102, pls. iv-ix, 30 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 444-445; Geol. Centralbl., XVIII, 328-330.

—— 1912 B

Der zweite Fund des Rhynchocephalen *Brachyrhinodon* in Elgin.

Neues Jahrb. Min. Geol. Pal., 1912, I, 51-57, pls. iv, v, 4 text-figs.

Huene, Friedrich—Continued 1912 C

Review of R. S. Lull: The life of the Connecticut Trias.

Neues Jahrb. Min. Geol. Pal., 1912, II, 120.

An abstract of Lull's paper. Lull, R. S., 1912 D. Amer. Jour. Sci., XXXIII, 1912, 397-422.

—— 1912 D

Beiträge zur Kenntnis des Schädels von *Eryops*.

Anat. Anz., XLI, 98-104, 8 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 448; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 76.

—— 1912 E

Der Unterkiefer von *Diplocaulus*.

Anat. Anz., XLII, 472-475, 3 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1913, II, Ref., 350; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 77.

—— 1912 F

Die Herkunft des Os interparietale der Mammalia.

Anat. Anz., XLII, 522-524, 5 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1913, Ref., II, 346; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 77.

—— 1912 G

[Remarks made in course of reviewing papers on vertebrate paleontology.]

Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 134-143.

—— 1913 A

A new phytosaur from the palisades near New York.

Bull. Amer. Mus. Nat. Hist., XXXII, 275-283, pls. xlix, L, 14 text-figs.

For abstracts see Neues Jahrb. Min. Geol. Pal., 1914, I, 334; Sci. Progress, VIII, 641; Rev. crit. Paléozool., XVIII, 5; XX, 49; Geol. Zentralbl., XXI, 264; Nature, XCII, 514.

—— 1913 B

The skull elements of the Permian Tetropoda in the American Museum of Natural History, New York.

Bull. Amer. Mus. Nat. Hist., XXXII, 315-386, 57 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 150-151; Rev. crit. Paléozool., XVIII, 5; XX, 50-54; XXI, 49; Geol. Zentralbl., XXI, 267; Geol. Mag. (5), X, 571.

—— 1913 C

Über *Lysorophus* aus dem Perm von Texas.

Anat. Anz., XLIII, 389-396, 5 text-figs.

For review see Neues Jahrb. Min. Geol. Pal., 1913, II, Ref., 350-352.

Huene, Friedrich—Continued 1913 D

Das Hinterhaupt von *Dimetrodon*.

Anat. Anz., XLIII, 519-522, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 68.

—— 1913 E

Ad notam.

Centralbl. Min. Geol. Pal., 1913, 480.

—— 1913 F

Beobachtungen über die Bewegungsart der Extremitäten bei Krokodilen.

Biol. Centralbl., XXXIII, 468-472, 7 figs.

—— 1913 G

Stegocephalen.

Handwörterbuch der Naturwissenschaften (Gustav Fischer, Jena), IX, 501-508, figs. 1-21.

The bibliography comprises 15 titles.

—— 1914 A

The dinosaurs not a natural order.

Amer. Jour. Sci. (4), XXXVIII, 145-146.

—— 1914 B

Saurischia and Ornithischia.

Geol. Mag. (6), I, 444-445.

Abstract in Geol. Zentralbl., XXVI, 315.

—— 1914 C

Über die Zweistämmigkeit der Dinosaurier, mit Beiträgen zur Kenntnis einiger Schädel.

Neues Jahrb. Min. Geol. Pal., Beil.-Bd. XXXVII, 577-589, pls. vii-xii.

Abstract in Geol. Zentralbl., XXII, 414.

—— 1914 D

Das natürliche System der Saurischia.

Centralbl. Min. Geol. Pal., 1914, 154-158, 1 text-fig.

Abstract in Geol. Zentralbl., XXII, 29.

—— 1914 E

Neue Beschreibung von *Ctenosaurus* aus dem Göttinger Buntsandstein.

Centralbl. Min. Geol. Pal., 1914, 496-499, 2 text-figs.

Abstract in Geol. Zentralbl., XXII, 413.

—— 1914 F

Coelurosaurier-Reste aus dem unteren Muschelkalk.

Centralbl. Min. Geol. Pal., 1914, 670-672, 2 text-figs.

—— 1914 G

Beiträge zur Geschichte der Archosaurier.

Geol. Pal. Abh. Jena (N.F.), XIII (XVII), 1-53, pls. i-vii, 61 text-figs.

There is a bibliography of 45 titles.

Abstracts in Neues Jahrb. Min. Geol., 1914, I, Ref., 503-507; Geol. Zentralbl., XXII, 414.

Huene, Friedrich—Continued 1914 H

Beiträge zur Kenntnis des Schädels einiger Pterosaurier.

Geol. Pal. Abh. Jena (N.F.), XIII (XVII), 55-65, pls. i, ii, 10 text-figs.

Reviewed in Neues Jahrb. Min. Geol. Pal., 1917, I, 109-110.

Abstract in Geol. Zentralbl., XXII, 414.

—— 1914 I

Nachträge zu meinen früheren Beschreibungen triassischer Saurischia.

Geol. Pal. Abh. Jena, (N.F.), XIII (XVII), 67-82, 56 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, 507; Geol. Zentralbl., XXII, 414.

—— 1914 J

Ueber Ichthyosaurier der Schwäbischen Trias.

Jahresh. Ver. Naturk. Württemb., LXX, lxxxix-xc.

—— 1914 K

Saurischia und Ornithischia triadica (''Dinosauria'' triadica).

Fossilium Catalogus. I: Animalia. Pt. IV, 1-21.

A list of the genera and species, with references to the most important literature of the subject.

Abstract in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 468.

—— 1915 A

On reptiles of the New Mexican Trias in the Cope collection.

Bull. Amer. Mus. Nat. Hist., XXXIV, 485-507, 64 text-figs.

Abstract in Geol. Zentralbl., XXVIII, 446.

—— 1915 B

Beiträge zur Kenntnis einiger Saurischier der schwäbischen Trias.

Neues Jahrb. Min. Geol. Pal., 1915, I, 1-27, pls. i-vii, text-figs. 1-17.

—— 1916 A

Beiträge zur Kenntnis der Ichthyosaurier im deutschen Muschelkalk.

Palaeontogr., LXII, 1-68, pls. i-viii, 96 text-figs.

Abstracts in Rev. crit. Paléozool., XXVIII, 20; Geol. Zentralbl., XXIV, 29-31.

—— 1918 A

Review of W. D. Matthew's ''A marsupial from the Belly River Cretaceous'' (Matthew, W. D., 1916 A).

Neues Jahrb. Min. Geol. Pal., 1918, Ref., 207-210.

Huene, Friedrich—Continued 1920 A
Stammesgeschichtliche Ergebnisse einiger Untersuchungen an Trias-Reptilien.
Zeischr. indukt. Abstamm. Vererbl., XXIV, 159-163, pl. vii, 1 text-fig.

—— 1920 B
Neue Beobachtungen an *Simosaurus* und ihre Verwertung zur Stammesgeschichte der Sauropterygier.
Zeitschr. indukt. Abstamm. Vererbl., XXIII, 206-209.

—— 1920 C
Systematische und genetische Betrachtungen über die Stegocephalen.
Zeitschr. indukt. Abstamm. Vererbl., XXIII, 209-212.

—— 1920 D
Sclerosaurus und seine Beziehungen zu anderen Cotylosauriern und zu den Schildkröten.
Zeitschr. indukt. Abstamm. Vererbl., XXIV, 163-166.

—— 1920 E
Ein Parasuchier aus dem oberen Muschelkalk von Bayreuth.
Senckenbergiana, II, 143-145, with figs.

—— 1920 F
Gonioglyptus, ein alttriassischer Stegocephale aus Indien.
Acta Zool., I, 433-464, pls. i-iii, 14 text-figs.
There are 30 titles cited in the bibliography.

—— 1920 G
Osteologie von *Aëtosaurus ferratus* O. Fraas.
Acta Zool., I, 465-491, 51 text-figs.
11 papers are cited in the bibliography.

—— 1921 A
Neue Beobachtungen an *Simosaurus.*
Acta Zool., II, 1921, 201-239, pls. i-iii, 14 text-figs.

—— 1921 B
Reptilian and stegocephalian remains from the Triassic of Pennsylvania in the Cope collection.
Bull. Amer. Mus. Nat. Hist., XLIV, 561-574, 20 figs.
Abstract in Neues Jahrb. Min. Geol. Pal., 1923, II, 427.

—— 1921 C
Coelurosaurier-Reste aus dem obersten Keuper von Halberstadt.
Centralbl. Min. Geol. Pal., 1921, 315-320, 6 figs.
Abstract in Geol. Zentralbl., XXVII, 509.

Huene, Friedrich—Continued 1921 D
Neue Pseudosuchier und Coelurosaurier aus dem württembergischen Keuper.
Acta Zool., II, 329-403, 4 pls., 35 text-figs.
20 papers are listed in the bibliography.

—— 1922 A
Ueber einen Sauropoden im obern Malm des Berner Jura.
Eclogæ geol. Helvetiæ, XVII, 80-94, pl. 4.
The bibliography includes 26 titles.

—— 1922 B
Die Ichthyosaurier des Lias und ihre Zusammenhänge.
4to., Berlin, i-vi+1-114 pages, 25 pls.
Pages 109-114 are occupied by the bibliography.
Abstract in Geol. Zentralbl., XXX, 445-446.
Review in Jour. Geol., XXXI, 687; Nature, CXII, 276.

—— 1922 C
Zur Osteologie des *Dicynodon*-Schädels.
Palaeont. Zeitschr., V, 58-71, 4 figs.
The volume is sometimes cited as of 1923.
Abstract in Geol. Zentralbl., XXXII, 118.

—— 1922 D
Bemerkungen über das Becken von *Ichthyosaurus quadricissus.*
Centralbl. Min. Geol. Pal., 1922, 277-282, 1 fig.

—— 1922 E
The Triassic reptilian order Thecodontia.
Amer. Jour. Sci. (5), IV, 22-26.
The bibliography presents 27 titles.
Abstract in Geol. Zentralbl., XXIX, 253.

—— 1922 F
Kurzer Überblick über die triassische Reptilordnung Thecodontia.
Centralbl. Min. Geol. Pal., 1922, 408-415, 1 table.
The bibliography consists of 26 titles.

—— 1922 G
Beiträge zur Kenntnis der Organisation einiger Stegocephalen der schwäbischen Trias.
Acta Zool., III, 395-460, pls. i, ii, 44 text-figs.
The bibliography presents 42 titles.
Abstract in Neues Jahrb. Min. Geol. Pal., 1923, II, 423-424.

—— 1922 H
Neue Untersuchungen zur Kenntnis der Parasuchier.
Jahrb. geol. Landesanst., Berlin, XLII, 1921 (1922), 59-160, 153 figs.
The literature cited comprises 60 titles.

Huene, Friedrich—Continued 1922 I
Parasuchier und ihre Verwandten.
Jahresh. Ver. Naturk. Württemb., LXVIII, xlv-xlvi.

——— 1923 A
Carnivorous Saurischia in Europe since the Triassic.
Bull. Geol. Soc. Amer., XXXIV, 449-458, 3 figs.

——— 1923 B
Contribution to the vomer-parasphenoid question.
Bull. Geol. Soc. Amer., XXXIV, 459-462, 2 figs.

——— 1923 C
Lines of phyletic and biological development of the Ichthyopterygia.
Bull. Geol. Soc. Amer., XXXIV, 463-468, 2 figs.

——— 1923 D
Die Stammesentwickelung der Ichthyosaurier.
Palaeont. Zeitschr., V, 265-271.

——— 1925 A
Ichthyosaurier-Reste aus Argentinien.
Centralbl. Min. Geol. Pal., 1925, 90-95, 6 figs.

——— 1925 B
Eine neue Rekonstruktion von *Compsognathus*.
Centralbl. Min. Geol. Pal., 1925, 157-160, 1 fig.
The bibliography presents 12 titles.

——— 1925 C
Triassischer Säugetierzahn aus Südwestafrika.
Centralbl. Min. Geol. Pal., 1925, 174-181, 3 figs.

——— 1925 D
Stammlinien der Reptilien.
Centralbl. Min. Geol. Pal., 1925, 229-239, 9 figs.
The bibliography includes 19 titles.

——— 1925 E
Einige Beobachtungen an *Mixosaurus cornalianus* (Bassani).
Centralbl. Min. Geol. Pal., 1925, 289-295, 3 figs.
There is a bibliography of 9 titles.

——— 1925 F
Ichthyosaurier aus der Kreide Argentiniens.
Rev. Mus. La Plata, XXVIII (ser. 3, IV), 234-238, figs. 1-5.
In German, followed by a Spanish translation.

Huene, Friedrich—Continued 1925 G
Die Bedeutung der *Sphenosuchus* Gruppe für den Ursprung der Krokodile.
Zeitschr. indukt. Abstamm. Vererbl., XXXVIII, 307-320, folding pls. iv, v, 1 text-fig.
The bibliography contains 14 titles.

——— 1925 H
Shastasaurus-Reste in der alpinen Trias.
Centralbl. Min. Geol. Pal., 1925, 412-417.

——— 1925 I
Ein neuer Pelycosaurier aus der unteren Permformation Sachsens.
Geol. Pal. Abh. Jena, XVIII (N.F. XIV), 215-264 (Heft 5, 3-52), pls. xxvi-xxxiii (i-viii), 28 text-figs.
In the bibliography are recorded 105 titles.

——— 1926 A
Zur Frage der phylogenetischen Bedeutung des Wirbelbaues der Tetrapoden.
Palaeont. Zeitschr., VII, 260-267, 3 figs.

——— 1926 B
The carnivorous Saurischia in the Jura and Cretaceous formations principally in Europe.
Rev. Mus. La Plata, XXIX, 35, 167, pls. i, ii, 56 text-figs.
Pages 114 to 167 are occupied by a Spanish version of the article. On pages 110 to 114 are presented 91 titles of papers pertaining to the subject.
Review in Amer. Jour. Sci. (5), XII, 458.

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Neue Ichthyosaurierfunde aus dem schwäbischen Lias.
Neues Jahrb. Min. Geol. Pal., Beil.-Bd., 66-86, pls. iii-v, 8 text-figs.

——— 1926 D
On several known and unknown reptiles of the order Saurischia from England and France.
Ann. Mag. Nat. Hist. (9), XVII, 473-489, 11 figs.
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Notes on the age of the continental Triassic beds in North America, with remarks on some fossil vertebrates.
Proc. U. S. Nat. Mus., LXIX, art. 18, 1-10, 6 figs.

——— 1926 F
Zur Beurteilung von *Protorosaurus*.
Centralbl. Min. Geol. Pal., 1926, Abt. B, 469-475, 1 fig.

Huene, Friedrich—Continued 1926 G
Einige Schildkrötenreste aus der obersten Trias Württembergs.
Centralbl. Min. Geol. Pal., 1926, Abt. B, 509-514.

—— 1926 H
Volständige Osteologie eines Plateosauriden aus dem Schwäbischen Keuper.
Geol. Pal. Abh. Jena, xv, 1-43, 7 pls, 2 text-figs.

—— 1926 I
Gondwana-Reptilien in Südamerika.
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Short review of the present knowledge of the Sauropoda.
Mem. Queensl. Mus., IX, 121-126.

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Ein kalifornischer Säbellöwe.
Aus der Heimat, XL, 144-149, 5 figs.
7 titles are included in the bibliography.

—— 1927 E
Die Beziehungen zwischen den paläozoischen und den mesozoischen Reptilien.
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—— 1927 G
Contribución a la paleogeografía de Sud América.
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Huene, Friedrich, and R. S. **Lull** 1908 A
Neubeschreibung des Originals von *Nanosaurus agilis* Marsh.
Neues Jahrb. Min. Geol. Pal., 1908, I, 134-144, pl. xiii, 10 text-figs.
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—— —— 1908 B
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Quart. Jour. Geol. Soc., XXIX, 522-531, pl. xviii.

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Supplemental note on the anatomy of *Hypsilophodon foxii.*
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Appendix to "Note on a modified form of dinosaurian ilium, hitherto reputed scapula."
Quart. Jour. Geol. Soc., XXXII, 364-366, 4 figs.

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Note on two skulls from the Wealden and Purbeck formations indicating a new subgroup of Crocodilia.
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Arch. Naturges., IV, i, 1-18.

Hummel, K. 1927 A

Die Schildkrötengattung *Trionyx* im Eozän von Messel bei Darmstadt und im aquitanischen Blättersandstein von Münzenberg in der Wetteau.

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Humphreys, John 1908 A

The teeth of fossil fishes.

Proc. Roy. Soc. Med., I, pt. 3, Odont. sec., 7-16, pl. i.

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Jour. Anat. Physiol. Lond., X, 659-671.

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Science (n.s.), L, 592.

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Notes on the Devonian "placoderm," *Dinichthys intermedius* Newb.

Bull. Amer. Mus. Nat. Hist., XXI, 27-36, pl. v, text-figs. 1, 2.

Abstracts in Geol. Centralbl., VIII, 380. Rev. crit. Paléozool., X, 210.

—— 1905 B

On the structure of two imperfectly known dinichthyids.

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Mem. Amer. Mus. Nat. Hist., IX, 105-154, pls. xii, xiii, 25 text-figs.

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Abstracts in Geol. Centralbl., XV, 310; Amer. Jour. Sci. (4), XXVII, 92; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 158.

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Science (n.s.), XXVII, 255.

—— 1908 C

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—— 1909 A

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The systematic relationships of certain American arthrodires.

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Geol. Mag. (5), VIII, 123-128, pl. viii, 3 text-figs.
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The Cretaceous chimæroids of North America.
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Notes on Devonic fishes from Scaumenac Bay, Quebec.
Bull. N. Y. State Mus., CLVIII, 127-139, pls. i-iii, 6 text-figs.
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—— 1912 C
An extinct giant-shark.
Scient. Amer. Suppl., LXXIII, 225, 2 figs.

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Descriptions of four new Palaeozoic fishes from North America.
Bull. Amer. Mus. Nat. Hist., XXXII, 245-250, pl. xlvii, 2 text-figs.
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The pleuracanthid sharks, with special reference to the cranium.
Ann. N. Y. Acad. Sci., XXII, 266-267 (abstract).

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Discovery of the Great Lake trout, *Cristivomer namaycush*, in the Pleistocene of Wisconsin.
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Note on a palaeoniscid fish from a Permian formation in South Dakota.
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Structure of the head and dorsal armor of *Dinichthys pustulosus* Eastman.
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Fish fauna of the conodont bed (Basal Genesee) at Eighteen-mile Creek, New York.
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Observations on the reconstructed skeleton of the dinosaurian reptile *Diplodocus carnegiei* as set up by Dr. W. J. Holland in the Natural History Museum in London, and an attempt to restore it by means of a model.
Geol. Mag. (6), IV, 356-370, pls. xxii, xxiii, 8 figs.

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Proc. Roy. Instn. G. Brit., II, 82-85.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," I, 1898, 300-304.

—— 1855 B

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Quart. Jour. Micr. Sci., vol. III, 127-130.

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Ann. Mag. Nat. Hist. (2), XVIII, 43-54.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," I, 1898, 432-444.

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Proc. Roy. Instn. G. Brit., II, 187-195.

—— 1858 D

On *Cephalaspis* and *Pteraspis*.

Foster and Lankester's "Scient. Memoirs of Huxley," I, 1898, 502-521 (Same as Huxley, T. H., 1858 A).

—— 1858 E

On a new species of *Plesiosaurus* from Street, near Glastonburg, with remarks on the structure of the atlas and axis vertebræ and of the cranium in that genus.

Foster and Lankester's "Scient. Memoirs of Huxley," I, 1898, 522-537 (Same as Huxley, T. H., 1858 B).

—— 1859 D

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Proc. Roy. Soc. Lond., IX, 381-457, 10 figs.

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Huxley, T. H.—Continued 1859 E

On the *Staganolepis robertsoni* (Agassiz) of the Elgin sandstones; and on the recently discovered footmarks in the sandstones of Cummingstone.

Quart. Jour. Geol. Soc., XV, 410-460, pl. xiv.

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—— 1859 F

On a new species of *Dicynodon* (*D. murrayi*) from near Colesberg, South Africa; and on the structure of the skull in the dicynodonts.

Foster and Lankester's "Scient. Memoirs of Huxley," II, 1899, 131-140, pls. ix, x (Same as Huxley, T. H., 1859 C).

—— 1859 G

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Quart. Jour. Geol. Soc., XV, 678-680, pl. xxv.

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Observations on the development of some parts of the skeleton of fishes.

Quart. Jour. Micr. Sci., VII, 33-46, pl. iii.

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—— 1859 I

On the dermal armour of *Jacare* and *Caiman*, with notes on the specific and generic characters of recent Crocodilia.

Foster and Lankester's "Scient. Memoirs of Huxley," II, 1899, 286-312 (Same as Huxley, T. H., 1859 B).

—— 1861 D

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Foster and Lankester's "Scient. Memoirs of Huxley," II, 1899, 421-460, 21 text-figs. (Same as Huxley, T. H., 1861 B).

For abstract see The Geologist, London, V, 1862, 276-280.

—— 1861 E

On *Pteraspis dunensis* (*Archæoteuthis dunensis* Roemer).

Foster and Lankester's "Scient. Memoirs of Huxley," II, 417-420, 2 text-figs. (Same as Huxley, T. H., 1861 A).

Huxley, T. H.—Continued 1862 A

The anniversary address to the Geological Society.

Quart. Jour. Geol. Soc., XVIII, xl-liv.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," II, 1899, 512-529.

——— 1863 B

Description of a new specimen of *Glyptodon* recently acquired by the Royal College of Surgeons.

Proc. Roy. Soc. Lond., XII, 316-326.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," II, 546-555.

——— 1863 C

Description of *Anthracosaurus russelli*, a new labyrinthodont from the Lanarkshire coal field.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," II, 1899, 558-572, 2 figs. (Same as Huxley, T. H., 1863 A).

——— 1863 D

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Med. Times and Gazette, 1863, I, 205-207; 233-234; 4 figs.

——— 1863 E

On the structure and classification of the Vertebrata.

Med. Times and Gazette, 1863, I, 417-419, 443-444, 471-472, 527-530, 553-556, 607-610, 633-635.

——— 1863 F

Lectures on the vertebrate skull.

Med. Times and Gazette, 1863, II, 1-6, 57-58, 107-110, 189-192, 371-374, 425-429, 475-478, 529-531, 579-580, 607-609, 633-636, 663-668, 63 text-figs.

——— 1864 B

On the osteology of the genus *Glyptodon*.

Proc. Roy. Soc. Lond., XIII, 108.

——— 1864 C

On the cetacean fossils termed "*Ziphius*" by Cuvier, with a notice of a new species *Belemnoziphius compressus* from the Red Crag.

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——— 1864 D

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Med. Times and Gazette, 1864, I, pp. 153-154, 177-178, 203-204, 229, 256-257, 284-285, 312-313, 343-344, 369-370, 398-399, 428-429, 456-457, 486-487, 509-510, 537-538, 564-565, 595-596, 617-618, 647-648, 671-672; II, pp. 40-41, 93-94, 123-124, 145-147.

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Huxley, T. H.—Continued 1865 B

On the osteology of *Glyptodon*.

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——— 1865 C

On a collection of vertebrate fossils from the Panchet rocks near Ranigung, Bengal.

Palaeont. Ind. (4), I, 1-24, pls. i-vi.

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——— 1866 B

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Republished in Foster and Lankester's "Scient. Memoirs of Huxley," suppl. vol., 1903, 20-67, pls. i-x.

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——— 1867 C

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Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 239-292, 36 text-figs. (Same as Huxley, T. H., 1867 A).

——— 1867 D

On a new specimen of *Telerpeton elginense*.

Quart. Jour. Geol. Soc., XXIII, 77-84, 5 figs.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 205-213, 5 figs.

——— 1868 B

Letter on the classification of birds.

The Ibis (2), IV, 357-362.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 292-297.

——— 1868 C

On the classification of the Alectoromorphæ and Heteromorphæ.

Proc. Zool. Soc. Lond., 1868, 294-319, 16 text-figs.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 346-373, 16 text-figs.

——— 1868 D

On the animals which are most nearly intermediate between birds and reptiles.

"Scient. Memoirs of Huxley," (Foster and Lankester), III, 1901, 303-313 (Same as Huxley, T. H., 1868 A).

Huxley, T. H.—Continued 1868 E

Remarks on *Archæopteryx lithographica.*

Proc. Roy. Soc. Lond., XVI, 243-248.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 340-345.

——— 1869 B

Abstract in Jour. Anat. Physiol. Lond., IV, 309.

——— 1869 E

On *Hypsilophodon*, a new genus of Dinosauria.

Geol. Mag., VI, 573.

——— 1869 F

Further evidence of the affinity between the dinosaurian reptiles and birds.

Geol. Mag., VI, 573-574.

——— 1869 G

On the representatives of the malleus and the incus of the Mammalia in the other Vertebrata.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 436-453, 8 text-figs. (Same as Huxley, T. H., 1869 B).

——— 1869 H

On *Hyperodapedon.*

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 374-390, with 1 text-fig. (Same as Huxley, T. H., 1869 C).

——— 1869 I

On the upper jaw of *Megalosaurus.*

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 394-396, pl. xxvii (Same as Huxley, T. H., 1869 D).

——— 1869 J

Further evidence of the affinity between the dinosaurian reptiles and birds.

Nature, I, 91.

Abstract of Huxley, T. H., 1870 C.

——— 1869 K

On the Dinosauria of the Trias, with observations on the classification of the Dinosauria.

Nature, I, 146.

——— 1870 E

On *Hypsilophodon foxii*, a new dinosaurian from the Wealden of the Isle of Wight.

Quart. Jour. Geol. Soc., XXVI, 3-12, pls. i, ii.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 454-464, pl. xxviii.

Huxley, T. H.—Continued 1870 F

The anniversary address of the president.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 510-550 (Same as Huxley, T. H., 1870 B).

——— 1870 G

Further evidences of the affinity between the dinosaurian reptiles and birds.

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——— 1870 H

On the classification of the Dinosauria, with observations on the Dinosauria of the Trias.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 487-509, pl. xxix (Same as Huxley, T. H., 1870 D).

——— 1870 I

Triassic Dinosauria.

Nature, I, 23-24.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 599-600.

——— 1871 A

Description of vertebrate remains from the Jarrow colliery.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," III, 1901, 182-197, pls. xvii-xxiii (Same as Huxley, T. H., 1867 B).

——— 1874 B

On the structure of the skull and of the heart of *Menobranchus lateralis.*

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 1-22, pls. i-iv (Same as Huxley, T. H., 1874 A).

——— 1875 D

Note on the development of the columella auris in the Amphibia.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 23-25 (Same as Huxley, T. H., 1875 A).

——— 1875 E

On *Staganolepis robertsoni* and on the evolution of the Crocodilia.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 66-83, pl. v (Same as Huxley, T. H., 1875 B).

——— 1876 D

On the classification of the animal kingdom.

Jour. Linn. Soc. Zool., XII, 199-226.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 35-60.

Huxley, T. H.—Continued 1876 E

On *Ceratodus forsteri*, with observations on the classification of fishes.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 84-124, 11 figs. (Same as Huxley, T. H., 1876 A).

—— 1876 F

On the evidence as to the origin of existing vertebrate animals.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 163-187 (Same as Huxley, T. H., 1876 B).

—— 1877 A

The crocodilian remains found in the Elgin sandstones, with remarks on the ichnites of Cummingstone.

Mem. Geol. Surv. U. K., III, 1-58, pls. i-xvi.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 200-241, pls. viii-xxiv.

—— 1879 A

On the characters of the pelvis in the Mammalia, and the conclusions respecting the origin of mammals which may be based on them.

Proc. Roy. Soc. Lond., XXVIII, 395-405, pl. viii.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 345-356, pl. xxv. Abstract in Nature, XX, 22-24.

—— 1880 B

For title see Hay, O. P., 1902 A, p. 120.

Translation into German in Kosmos (Krause), 1881, Jahrg., V, 15-28.

—— 1880 C

The coming of age of the Origin of Species.

Nature, XXII, 1-4.

Republished in Foster and Lankester's "Scient. Memoirs of Huxley," IV, 1902, 395-403.

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—— 1920 A

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—— 1922 A

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Jaques, H. E. 1922 A

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Jaquet, Maurice 1897 A

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Arch. Sci. Med., II, 174-206, pls. v-viii.

—— 1898 A

Recherches sur l'anatomie et l'histologie du *Silurus glanis* L.

Arch. Sci. Med. III, 101-152; 213-229, pls. i-xiii; xvi-xxii.

The first part of this treatise deals with the osteology.

—— 1898 B

Contribution à l'anatomie comparée des systèmes squelettaire et musculaire de *Chimæra collei, Callorhynchus antarcticus, Spinax niger, Protopterus annectens, Ceratodus forsteri* et *Axolotl.*

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Arch. Sci. Med., IV, 177-188, pls. xxxiv-xl.

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Ann. Sci. Med., IV, 189-225, pls. xli-xlv.

This paper deals with the anatomy of the axolotl.

Jaquet, Maurice—Continued 1899 C

Contribution à l'anatomie comparée des systèmes squelettaire et musculaire de *Chimæra collei, Callorhynchus antarcticus, Spinax niger, Protopterus annectens, Ceratodus forsteri* et *Axolotl.*

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The Black Hills Engineer, XIV, 1-6, pl. i, text-fig. 1.

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—— 1907 A

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Reviewed in Jour. Mamm., II, 190-192.
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Joleaud, L.—Continued 1919 B

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C. R. Acad. Sci. Paris, CLXVIII, 310-312.
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—— 1919 D

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—— 1920 C

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Rev. crit. Paléozool., XXIV, 91-92.

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Amer. Naturalist, XXXII, 173-176.

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Science (n.s.), XIV, 545-567.

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Amer. Naturalist, XXXVII, 135-137.

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Amer. Naturalist, XXXVIII, 597-599.

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Henry Holt and Company, New York, 4to, I, i-xxvi+1-624 pages, colored frontispiece, and 393 figures; vol. II, i-xxii+1-599 pages, colored frontispiece, 113 figures.

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Science (n.s.), XXII, 872-873.

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Bull. Dept. Geol., Univ. Calif., V, 95-145, pls. xi, xii; 33 text-figs.

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Amer. Naturalist, XLII, 800-811.

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—— 1919 B

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—— 1919 C

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Science (n.s.), XLIX, 336-337.

Jordan, David Starr—Continued 1919 D

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Stanf. Univ. Publ. Univ. Ser. LXII, 285-410+i-xv pages.

—— 1920 A

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Nat. Hist., XX, 18-22, 5 figs.

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—— 1920 B

An ancient moonfish.

Scient. Monthly, XI, 470-473, 3 figs.

—— 1920 C

The genera of fishes. Pt. IV: From 1881 to 1920, thirty-nine years, with the accepted type of each.

Stanf. Univ. Publ. Univ. Ser., 411-576+i-xviii.

—— 1921 A

The fish fauna of the California Tertiary.

Stanf. Univ. Publ. Univ. Ser. Biol. Sci., I, No. 4, 237-300, pls. i-lvii.

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—— 1921 B

The Miocene shore-fishes of California.

Scient. Monthly, XIII, 460-464, 4 figs.

—— 1922 A

Description of a new species of fossil herring, *Quisque bakeri*, from the Texas Miocene.

Amer. Jour. Sci. (5), III, 249-250, 2 figs.

Abstract in Geol. Zentralbl., XXVIII, 186.

—— 1922 B

Some sharks' teeth from the California Pliocene.

Amer. Jour. Sci. (5), III, 338-342, 3 figs.

Abstract in Geol. Zentralbl., XXIX, 253.

—— 1922 C

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Bijdr. Dierk. Amsterdam, XXII (Feestnum. Max Weber), 175-178.

—— 1922 D

Restorations figuring Miocene fishes.

Nat. Hist., XXII, 271-274, 9 figs.

—— 1923 A

A classification of fishes, including families, and genera as far as known.

Stanf. Univ. Publ. Univ. Ser. Biol. Sci., III, No. 2, 79-243+i-x.

Jordan, David Starr—Continued 1924 A

Description of a recently discovered sculpin from Nevada regarded as *Cottus beldingi*.

Proc. U. S. Nat. Mus., LXV, art. 6, 1-2, pl. i.

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Miocene fishes from Southern California.

Bull. So. Calif. Acad. Sci., XXIII, 42-50, pls. F-L.

—— 1925 A

A collection of fossil fishes in the University of Kansas from the Niobrara formation of the Cretaceous.

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—— 1925 B

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Stanf. Univ. Publ. Univ. Series, Biol. Sci., IV, No. 1, 1-51, pls. i-xxi.

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Zool. Anz., LXVIII, 7-8.

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—— 1927 A

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Copeia, No. 161, Jan. 13, 1927, 190-191.

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—— 1927 C

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—— 1928 A

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Copeia, No. 166, 1-4.

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Supplementary notes on fossil sharks.

Bull. Dept. Geol., Univ. Calif., VII, 243-256, 5 text-figs.

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Occ. Papers Calif. Acad. Sci., XII, 3-113, pls. i-xx.

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Synopsis of the fishes of North America.

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The fossil fishes of the diatom beds of Lompoc, California.

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Fossil sharks and rays of the Pacific slope of North America.

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A monographic review of Atherinidæ, or silversides.

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Die Entwicklung des Sternums bei *Lacerta*.

Acta. Zool., IV, 65-110, 1 pl., 28 text-figs. The bibliography embraces 48 titles.

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The structure of the Aulostomidæ, Syngnathidæ and Solenostomidæ.

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There is a bibliography of 59 titles.

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N. Y. Times Mag., Jan. 23, 1927, 8-9; 16, 6 figs.

An exposition of Prof. H. F. Osborn's views on the origin of man.

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Bull. Soc. belge Géol. (2), XIII, Proc.-verb., 205-215, pl. C, 9 text-figs.

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Verh. min. Ges. St. Pétersb. (2), XLI, Prot., 32-37, 5 text-figs.
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—— 1911 A
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—— 1912 A
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The text is in English. Abstract in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 475-476.

—— 1915 A
Notice sur la nature de l'organe hélicoïdal du *Helicoprion*.
Bull. Soc. Sci. nat. Erkat., XXXV, 117-145, 1 pl., 17 text-figs.
Text in Russian and French. Abstract in Geol. Mag. Lond. (6), III, 373.

—— 1916 A
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Bull. Acad. Sci. Pétrograd. (6), X, 701-708, 5 text-figs.
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Helicoprion ivanovi n. sp.
Bull. Acad. Sci. Russ. (VI), XVI, 369-378, 4 figs.

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Notice sur les segments dentaires des édestides et leur orientation.
Bull. Acad. Sci. Russ. (6), XVI, 379-388, 11 figs.

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Sur une nouvelle trouvaille de restes de *Parahelicoprion* et sur les relations de ce genre avec *Campodus*.
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Squelette du mammouth qui porte les traces de ce que certaines parties du corps de cet animal servaient de nourriture à l'homme contemporain.
Mém. Acad. Sci. St. Pétersb. (8), XI, art. 7, 1-60, pls. i-viii.
This paper is printed in Russian.

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Findet sich eine "Trägerfunction" der paarigen Flossen nur bei den Dipnoern?
Zool. Anz., XXII, 345-346.

—— 1913 A
Die Lederschildkröte (*Dermochelys coriacea* L.) eine aussterbende Tierform.
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Notitzen über die fossilen sogenannten Grasfressenden Wale.
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Ueber die Familie Triglidæ nebst einigen Worten über die Classification.
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Significance of the relation of proboscidean remains to the surface of Nebraskan gumbotil, near Osceola, Clarke County, Iowa.
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The extent to which the posterior segments of the body have been transmuted and suppressed in the evolution of man and allied primates.

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Nature, LXXXVIII, 294.

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Zur Abstammungsgeschichte unserer Hunde-Rassen. Eine Abwehr gegenüber Herrn. Prof. Th. Studer.

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Rodent fauna of the late Tertiary beds at Virginia Valley and Thousand Creek, Nevada.

Bull. Dept. Geol. Univ. Calif., V, 421-437, 20 text-figs.

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—— 1911 A

A fossil beaver from the Kettleman Hills, California.

Bull. Dept. Geol., Univ. Calif., VI, 401-402, 1 text-fig.

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Kellogg, Louise—Continued 1912 A

Pleistocene rodents of California.

Bull. Dept. Geol., Univ. Calif., VII, 151-168, 16 text-figs.

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A revision of the *Microtus californicus* group of meadow mice.

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—— 1921 A

A new pinniped from the Upper Pliocene of California.

Jour. Mamm., II, 212-226, 13 figs.

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Lambe, Lawrence M.—Cont'd 1905 C

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Ottawa Naturalist, XIX, 232-234.

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Trans. Roy. Soc. Canada (2), XII, 151-156, pl. i.

Abstracts in Geol. Centralbl., IX, 409; X, 45-46; Rev. crit Paléozool., XI, 94; Sci. Progress, II, 523.

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Summ. Rep. Geol. Surv. Canada for 1906, 174-176.

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Report of vertebrate palæontologist.

Summ. Rep. Geol. Surv. Canada for 1905, 135-138.

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On a tooth of *Ovibos* from the Pleistocene gravels near Midway, B. C.

Ottawa Naturalist, XXI, 15-18, pl. i.

Tooth referred provisionally to *Ovibos moschatus*.

Abstracts in Geol. Centralbl., X, 41; Rev. crit. Paléozool., XI, 220.

Lambe, Lawrence M.—Cont'd 1907 B

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Mon. U. S. Geol. Surv., XLIX, 178-179.

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On a new crocodilian genus and species from Judith River formation of Alberta.

Trans. Roy. Soc. Canada (3), I, 219-244, pls. i-v.

Describes *Leidyosuchus canadensis*.

Abstracts in Geol. Centralbl., X, 43; Nature, LXXVIII, 278; Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 450; Sci. Progress, III, 462.

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Ottawa Naturalist, XXIV, 149-151, pl. iii.

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Ottawa Naturalist, xxv, 21-26, pls. i-iii.

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Summ. Rep. Geol. Surv. Canada for 1910, 269-271.

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Summ. Rep. Geol. Surv. Canada for 1911, 346-349.

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Ottawa Naturalist, xxvii, 21-25, pls. i-iii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, ii, Ref., 512; Rev. crit. Paléozool., xviii, 1; xx, 49.

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Ottawa Naturalist, xxvii, 57-63, pls. iv-vii, 1 text-fig.

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Ottawa Naturalist, xxvii, 109-116, pls. x-xii.

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The occurrence of helodont teeth at Roche Miette and vicinity, Alberta.

Bull. Victoria Mem. Mus. Canada, i, 17-20, pl. ii.

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Lambe, Lawrence M.—Cont'd 1914 A

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Trans. Roy. Soc. Canada (3), viii, sec. 4, 11-16, 1 plate, 1 text-fig.

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Ottawa Naturalist, xxvii, 129-135, pls. xiii-xvii.

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Ottawa Naturalist, xxvii, 145-155, pls. xviii-xx.

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Report on tooth of *Desmostylus*.

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Lambe, Lawrence M.—Cont'd 1917 E

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—— 1901 A
The gold belt of the Blue Mountains of Oregon.
Rep. U. S. Geol. Surv., XXII, pt. 2, 551-776, pls. lxiii-lxxviii, text-figs. 79-88.

Lindgren, Waldemar—Cont'd 1911 A
The Tertiary gravels of the Sierra Nevada of California.
U. S. Geol. Surv. Profess. Paper LXXIII, 1-226, pls. i-xxviii, 16 text-figs.

——, and N. F. **Drake** 1904 A
Description of the Nampa [Idaho] quadrangle.
Folio U. S. Geol. Surv., CIII, 1-5, 2 maps, 4 text-figs.

—— —— 1904 B
Description of the Silver City quadrangle.
Folio U. S. Geol. Surv., CIV, 1-6, 3 maps.

Lindsay, Beatrice 1885 A
On the avian sternum.
Proc. Zool. Soc. Lond., 684-716, pls. xlii-xlv, 6 text-figs.

Lindström, G. 1895 A
Abstract in Geol. Mag. (4), II, 170.

Linnæus, Carolus 1758 A
Systema Naturæ.
Holmiæ, 1758, 8vo., Ed. 10, I, 1-824.
The systematic arrangement of the Vertebrata occupies pages 1-388.

Linstow, O. 1908 A
Die Verbreitung des Bibers im Quartär.
Abh. Ber. Mus. Natur. Heimatk., Magdeburg, I, 213-342, 2 pls.
The bibliography presents 671 titles. Abstract in Geol. Centralbl., XII, 441.

Lippincott, W. A. 1920 A
The pelvic wing in poultry.
Amer. Naturalist, LIV, 535-539, 7 figs.
The bibliography comprises 5 titles.

Lloyd, E. Russell, and C. J. **Hares** 1915 A
The Cannonball marine member of the Lance formation of North and South Dakota and its bearing on the Lance-Laramie problem.
Jour. Geol., XXXIII, 523-547, 1 text-fig.

Lloyd, J. H., and Edith M. **Sheppard** 1922 A
A contribution to the anatomy of a hammerhead shark (*Zygæna malleus* Shaw).
Proc. Zool. Soc. Lond., 1922, 971-981, 7 figs.
The bibliography presents 15 titles.

Lloyd, John Uri 1904 A
When did the American mammoth and mastodon become extinct?
Records of the Past, III, 43-46.

Lobley, J. Logan 1908 A
The American fauna and its origin.
Jour. Victoria Inst., XL, 190-221.

Lockington, William N. 1884 A
Natural history of mammals, Cetacea, Cynoidea, Æluroidea, Pinnipedia.
Stand. Nat. Hist., V, 178-209, figs. 96-111; 408-479, figs. 190-223.

Lockwood, S. 1882 A
Mastodons in New Jersey.
Amer. Jour. Sci. (3), XXIV, 294.

—— 1883 B
A mastodon in an old beaver-meadow.
Pop. Sci. Month., XXII, 341-345.

—— 1884 A
Natural history of mammals. Carnivora.
Stand. Nat. Hist., V, 353-408, figs. 172-189.

Locy, William A. 1894 A
The derivation of the pineal eye.
Anat. Anz., IX, 169-180, 5 figs.

Loder, Edmund G. 1914 A
Antlers of red deer.
Proc. Zool. Soc. Lond., 1914, pt. 2, 488-489.

Löhle, B. 1913 A
Die Bildung des Gaumens bei *Cavia cobaya.*
Morphol. Jahrb., XLVI, 595-654, 39 text-figs., pls. xv-xvi.

Lönnberg, Einar 1901 A
Pisces (Fische).
Bronn's Klass. Ordn., VI, Abth. 1, 1-48.
This part of Lönnberg's work deals with the history of ichthyology and is continued in "Lönnberg, E., 1902 A."

—— 1902 A
Pisces (Fische).
Bronn's Klass. Ordn., VI, Abth. 1, 49-99.
On pages 63-82 is a list of 229 titles of historical and faunal ichthyological works. On pages 83-99 the author discusses the origin of the Vertebrata.

—— 1903 A
On the variation of the elk (*Alces alces*).
Proc. Zool. Soc. Lond., 1902, II, 352-360, 9 text-figs.

—— 1905 A
On some fossil remains of a condor from Bolivia.
Bull. Geol. Inst. Upsala, VI, 1-11, 4 text-figs.

—— 1907 A
Notes on Steller's sea-cow.
Fauna Flora Upsala, II, 1-13, 1 fig.
The title and text are in Swedish.

Lönnberg, Einar—Continued 1907 B

A page from the history of the phylogeny of the elephants.

Fauna Flora Upsala, II, 53-69; 110-119; 10 text-figs.

Also in Vet.-Akad. Arsbok. Stockh. 1907, 173-197. In both cases the text is in Swedish.

—— 1909 A

A study of the variation of European beavers.

Arkiv Zool., V, No. 6, 1-16, 5 text-figs.

—— 1909 B

Taxonomic notes about palearctic reindeer.

Arkiv Zool., VI, No. 4, 1-18, 5 text-figs.

—— 1910 A

The object and use of tails in the case of vertebrate animals.

Fauna Flora Upsala, V, 9-25, 49-71, 118-128, 17 text-figs.

The title and the text are in Swedish.

—— 1910 B

Om hvalarnes härstamning (On the origin of whales).

Vet.-Akad. Arsbok. Stockh., 1910, 219-259, 8 text-figs.

Abstract in Nature, LXXXIV, 270-271.

—— 1911 A

On the origin of the whales.

Fauna Flora Upsala, VI, 20-46; 57-82, with illustrations.

The text is in Swedish.

—— 1911 B

Der Penisknochen zweier seltener Carnivoren.

Anat. Anz., XXXVIII, 230-232, 2 text-figs.

The two animals mentioned are *Latax lutris* and *Bassariscus sumichrasti*.

—— 1911 C

Remarks on the dentition of *Delphinapterus leucas*.

Arkiv Zool., VII, art. 2, 1-18, 7 figs.

Abstract in Nature, LXXXIV, 270.

—— 1911 D

The pelvic bones of some Cetacea.

Arkiv Zool., VII, art. 10, 1-15, 12 figs.

—— 1913 A

Notes on guanacos.

Arkiv Zool., VIII, No. 19, 1-8, 2 text-figs.

—— 1916 A

A remarkable occurrence of the first hind toe in the common fox (*Vulpes vulpes*).

Arkiv Zool., X, No. 21, 1-5, 2 figs.

Lönnberg, Einar—Continued 1922 A

On some anomalies in the dentition of *Phoca hispida*.

Bijdr. Dierk. Amsterdam, XXII (Feestnum. Max Weber), 169-178, 6 text-figs.

—— 1923 A

Remarks on some palæarctic bears.

Proc. Zool. Soc. Lond., 1923, 85-95, pls. i, ii.

—— 1924 A

Cetological notes.

Arkiv Zool., XV, No. 24, 1-17, 6 figs.

—— 1926 A

Notes on some cats from eastern Asia, with description of a new genus.

Arkiv Zool., XVIII, No. 2, 1-22, pl. i, 5 text-figs.

Loewe, Stephan 1914 A

Über das Vorkommen von Zahnerkrankungen und speziell von Karies bei fossilen Tieren.

Deutsche Monastsschr. Zahnheilk., XXXII, 787-794, pl. xii.

Lohest, M. 1888 A

Recherches sur les poissons des terrains paléozoïques de Belgique.

Ann. Soc. géol. Belgique, XV, Mém., 112-203, pls. i-xi.

Abstract in Geol. Mag. (3), VII, 40-42.

—— 1888 B

Découverte du plus ancien amphibien connu et de quelques fossiles remarkable dans le Famennien supérieur de Mohave.

Ann. Soc. géol., Belgique, XV, CXX-CXXVII, 1 fig.

Longman, Heber A. 1915 A

On a giant turtle from the Queensland Lower Cretaceous.

Mem. Queensl. Mus., III, 24-29, pl. xii, 2 text-figs.

—— 1924 A

The zoogeography of marsupials.

Mem. Queensl. Mus., VIII, pt. 1, 1-15.

There is appended a bibliography of 58 titles.

Longmuir, —— 1860 A

On the restoration of *Pterichthys* in "The Testimony of the Rocks."

Proc. Brit. Assoc. Adv. Sci., XXIX, 1859, Aberdeen, Append., 263.

Loomis, F. B. 1900 A

Abstract in Geol. Centralbl., I, 120-122, 1901.

Loomis, F. B.—Continued 1901 A

On Jurassic stratigraphy in southeastern Wyoming.

Bull. Amer. Mus. Nat. Hist., XIV, 189-197, pls. XXVI, XXVII.

——— 1904 A

Two new river reptiles from the Titanotherium beds.

Amer. Jour. Sci. (4), XVIII, 427-432, 11 text-figs.

Abstract in Geol. Centralbl., VI, 716.

——— 1904 B

On some marine fossils in the Titanothere beds.

Science (n.s.), XIX, 254.

——— 1905 A

Hyopsodidæ of the Wasatch and Wind River basins.

Amer. Jour. Sci. (4), XIX, 416-424, 8 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, II, Ref., 133-134; Geol. Centralbl., VII, 616-617.

——— 1905 B

Momentum in variation.

Amer. Naturalist, XXXIX, 839-843, 2 text-figs.

——— 1905 C

The Amherst College expedition to the Wasatch and Wind River basins in 1904.

Science (n.s.), XXI, 296.

——— 1906 A

Wasatch and Wind River Primates.

Amer. Jour. Sci. (4), XXI, 277-285, 8 text-figs.

Abstract in Geol. Centralbl., XI, 106.

——— 1906 B

A fossil bird from the Wasatch.

Amer. Jour. Sci. (4), XXII, 481-482, 3 text-figs.

——— 1907 A

Wasatch and Wind River rodents.

Amer. Jour. Sci. (4), XXIII, 123-130, 7 text-figs.

Abstracts in Geol. Centralbl., XI, 382; Sci. Progress, II, 508.

——— 1907 B

Origin of the Wasatch deposits.

Amer. Jour. Sci. (4), XXIII, 356-364, 3 text-figs.

Abstracts in Nature, LXXVII, 117; Sci. Progress, II, 502.

Loomis, F. B.—Continued 1908 A

Rhinocerotidæ of the Lower Miocene.

Amer. Jour. Sci. (4), XXVI, 51-64, 15 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1908, II, Ref., 431-435; Geol. Centralbl., XII, 595; Naturw. Rundschau, XXIII, 1908, 643; Nature, LXXX, 263.

——— 1908 B

A new horse from the Lower Miocene.

Amer. Jour. Sci. (4), XXVI, 163-165, 1 text-fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1908, II, Ref., 429-430; Geol. Centralbl., XII, 596.

——— 1909 A

Turtles from the Upper Harrison beds.

Amer. Jour. Sci. (4), XXVIII, 17-26, 9 text-figs.

Abstracts in Geol. Centralbl., XV, 219; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 293.

——— 1909 B

Camels of the Lower Miocene.

Science (n.s.), XXIX, 196.

——— 1910 A

A new genus of peccaries.

Amer. Jour. Sci. (4), XXX, 381-384, fig. 1.

Describes *Pediohyus ferus* from the Upper Harrison beds, Nebraska.

Abstracts in Geol. Centralbl., XVI, 215; Sci. Progress, V, 671.

——— 1910 B

Osteology and affinities of the genus *Stenomylus*.

Amer. Jour. Sci. (4), XXIX, 297-323, 30 text-figs.

Abstracts in Geol. Centralbl., XV, 311; Sci. Progress, V, 670; Nature, LXXXIV, 89.

——— 1910 C

Ontogeny: a study of the value of young features in determining phylogeny.

Pop. Sci. Month., LXXVII, 292-294.

——— 1911 A

A new mink from the shell heaps of Maine.

Amer. Jour. Sci. (4), XXXI, 227-229, figs. 1, 2.

Describes *Luteiola vison antiquus*.

——— 1911 B

The camels of the Harrison beds, with three new species.

Amer. Jour. Sci. (4), XXXI, 65-70, 3 text-figs.

Abstracts in Geol. Centralbl., XVI, 215; Sci. Progress, VI, 560.

Loomis, F. B.—Continued 1911 C
The adaptations of the Primates.
Amer. Naturalist, XLV, 479-492, 6 text-figs.

—— 1915 A
A new mosasaur from the Ft. Pierre.
Amer. Jour. Sci. (4), XXXIX, 555-566, 9 text-figs.
Abstract in Geol. Zentralbl., XXV, 468.

—— 1917 A
South Carolina mastodon (abstract).
Bull. Geol. Soc. Amer., XXVIII, 210.

—— 1918 A
An unusual mastodon.
Amer. Jour. Sci. (4), XLV, 438-444, 4 text-figs.
Brief abstracts in Bull. Geol. Soc. Amer., XXVIII, 210-211; Geol. Zentralbl., XXV, 270.

—— 1919 A
An amphibian from the Eocene.
Amer. Jour. Sci. (4), XLVII, 217-219, 1 fig.
Abstract in Geol. Zentralbl., XXV, 43.

—— 1920 A
On *Ticholeptus rusticus* and the genera of Oreodontidæ.
Amer. Jour. Sci. (4), L, 281-292, 4 figs.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 388; Geol. Zentralbl., XXVII, 28.

—— 1921 A
Origin of South American faunas.
Bull. Geol. Soc. Amer., XXXII, 187-196.

—— 1922 A
Derivation of South American faunas.
Pan-Amer. Geol., XXXVII, 61-63.

—— 1923 A
Oreodons of the Lower Harrison beds.
Amer. Jour. Sci. (5), VI, 222-228, 5 figs.
Abstract in Geol. Zentralbl., XXX, 539.

—— 1924 A
The oreodonts of the Lower Oligocene.
Ann. Carnegie Mus., XV, 369-378, pls. liii-liv, 3 text-figs.

—— 1924 B
Miocene oreodonts in the American Museum.
Bull. Amer. Mus. Nat. Hist., LI, art. 1, 1-37, 26 figs.

—— 1924 C
Artifacts associated with the remains of a Columbian elephant at Melbourne, Florida.
Amer. Jour. Sci. (5), VIII, 503-508, 2 figs.
Abstract in Geol. Zentralbl., XXXII, 507.

Loomis, F. B.—Continued 1925 A
Leptauchenia and *Cyclopidius*.
Amer. Jour. Sci. (5), IX, 241-249, 4 figs.

—— 1925 B
Origin and development of the artiodactyl dentition (abstract).
Bull. Geol. Soc. Amer., XXXVI, 226.

—— 1925 D
The Florida man.
Science (n.s.), LXII, 436.

—— 1925 E
Dentition of artiodactyls.
Bull. Geol. Soc. Amer., XXXVI, 583-604, 20 figs.

—— 1926 A
The evolution of the horse.
Boston, Marshall Jones Company, i-xvi+ 1-233 pages, 25 pls., 41 text-figs.
Reviewed in Amer. Jour. Sci. (5), XIV, 167-169.

—— 1926 B
Early man in Florida.
Nat. Hist., XXVI, 260-262, 2 figs.

—— 1927 A
A giant tortoise from Florida.
Amer. Jour. Sci. (5), XIII, 435-439, 2 figs.

——, and D. B. **Young** 1912 A
On the shell heaps of Maine.
Amer. Jour. Sci. (4), XXXIV, 17-42, 16 text-figs.

—— See **Gidley** and **Loomis**, 1926 A.

Loomis, Leverett Mills 1923 A
On the classification of the albatrosses, petrels, and diving petrels.
Auk, XL, 596-602.

Loper, S. Ward 1893 A
A new fossil fish (*Ischypterus newberryi*).
Pop. Sci. News, XXVII, 75, 1 fig.

—— 1899 A
Fossiliferous black shales.
Pop. Sci., XXXIII, 97-98, 3 figs.
Figures 2 fossil fishes from the Triassic of Connecticut.

Lorenz, Ludovic E. F. 1807 A
Observationes anatomicæ de pelvi reptilium. Speciminis loco inauguralis.
Halæ Saxonum, 8vo., 1-60 pages, 1 plate.

Lorenz, Ludwig 1904 A
Das Becken der Stellerschen Seekuh.
Abh. geol. Reichsanst. Wien, XIX, pt. 3, 1-11, pl. i, 2 text-figs.
Abstract in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 124-125.

—— 1904 B
Ueber das Becken der Sirenen.
Verh. zool.-bot. Ges. Wien, L, 142-143.

Lorenz, Ludwig—Continued 1908 A

Die in historischer Zeit ausgestorbenen Vögel.

Verh. zool.-bot. Ges. Wien, LVIII, 217-232.

Gives a list of all the birds known to have become extinct within historical times.

Lortet, L. 1887 A

Note sur le *Rhizoprion bariensis* Jourdan.

Arch. Mus. hist. nat. Lyon (1), IV, 315-319, pls. XXV^{bis} et XXV^{ter}.

Lotichius, A. 1911 A

Der Säbeltiger.

Ber. Senckenb. naturf. Ges., XLII, 268-279, 2 pls.

Abstract in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 501.

Louderback, George Davis 1907 A

Where mammoths roved. Recent remarkable discoveries in Carson, Nevada.

Sunset Mag., XIX, 205-216, 8 illustrations.

—— 1924 A

Period of scarp production in the Great Basin.

Bull. Dept. Geol. Univ. Calif., XV, 1-44, 2 pls., 3 text-figs.

Low, James W. 1926 A

The pelvic girdle in the batrachian *Menopoma alleghaniense* Harlan.

Proc. Zool. Soc. Lond., 1926, 913-926, 4 figs.

There is a bibliography of 15 titles.

Lubosch, Wilhelm 1906 A

Ueber das Kiefergelenk der Monotremen.

Jena Zeitschr. Naturwiss., XLI (N.F. XXXIV), 549-606, pls. XXVI-XXIX, 5 text-figs.

The bibliography presents 37 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 61-64.

—— 1906 B

Über Variationen am Tuberculum articulare des Kiefergelenks des Menschen und ihre morphologische Bedeutung.

Morphol. Jahrb., XXXIII, 322-353, 16 figs.

There is a bibliography of 35 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 59-61.

—— 1907 A

Universelle und spezialisierte Kaubewegungen bei Säugetieren.

Biol. Centralbl., XXVII, 613-624.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 69-71.

Lubosch, Wilhelm—Continued 1908 A

Ueber Wirbeltiergelenke.

Anat. Anz., Ergänzungsh., XXXII, 192-208, 12 text-figs.

—— 1908 B

Das Kiefergelenk der Edentaten und Marsupialier; nebst Mittheilungen über die Kaumuskulatur dieser Thiere.

Semon's "Zool. Forschungsr.," IV, lfg. 4 (Denk. med. naturw. Gesellsch. Jena, VII), 519-556, pls. XXXI-XXXV, 9 text-figs.

Appended is a bibliography of 18 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 71-75.

—— 1909 A

Anpassungserscheinungen bei der Verkalkung des Selachierknorpels.

Anat. Anz., XXXV, 1-8, 8 figs.

The bibliography presents 6 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 141.

—— 1911 A

Allgemeine und spezielle Bemerkungen über Methode. Inhalt und Wert der Kritik, die Fuchs an meinen Untersuchungen über das Kiefergelenk der Säugetiere geübt hat.

Anat. Anz., XXXVIII, 310-333.

Prefixed is a list of 10 recent papers by Drüner, Fuchs and Lubosch dealing with the subject.

—— 1911 B

Was lehrt die Phylogenese der Gelenke für die Beurteilung des Kaugelenkes der Säugetiere?

Biol. Centralbl., XXXI, 738-751.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 68-70.

—— 1914 A

Review of Abel's "Grundzüge der Paläobiologie der Wirbeltiere" (Abel, O., 1912 F).

Naturwiss. Berlin, II, 424-425.

—— 1923 A

Die Bildung des Markknochens beim Hühnchen und Säugetieren und das Wesen der enchondralen Ossification in historischer Betrachtung.

Morphol. Jahrb., LIII, 49-93, 17 figs.

The bibliography occupies pages 92-93.

—— 1926 A

Über die Gliederung der Rippen bei Amnioten.

Verh. Anat. Ges., XXXV, 103-117, 17 figs.

There are 6 titles in the bibliography.

Lubsen, J. 1905 A

Untersuchungen zur vergleichenden Segmental-Anatomie.

Petrus Camper. Bijdr. Anat., III, 431-484, 26 figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 64.

Lucae, Johann Christian 1872 A

Die Robbe und die Otter in ihrem Knochen- und Muskelskelet.

Abh. Senckenb. naturf. Ges., VIII, 277-378, pls. i-xiv, 8 text-figs.

—— 1875 A

Die Robbe und die Otter in ihrem Knochen- und Muskelskelet.

Abh. Senckenb. naturf. Ges., IX, 369-496, pls. i-xvii.

This paper is devoted principally to a consideration of the muscles.

Lucas, F. A. 1887 A

Osteological note.

Science (o.s.), IX, 460-461.

On rudimentary metacarpals in *Bison*.

—— 1890 B

Description of some bones of Pallas' cormorant (*Phalacrocorax perspicillatus*).

Proc. U. S. Nat. Mus., XII, 88-94, pls. ii-iv.

—— 1890 C

The expedition to Funk Island, with observations upon the history and anatomy of the great auk.

Rep. U. S. Nat. Mus., 1887-1888, 493-529, pls. lxxi-lxxiii.

—— 1894 A

The bird's foot.

Nat. Sci., V, 208-210, 395-396.

—— 1894 B

Notes on the air-sacs and hollow bones of birds.

Nat. Sci., IV, 36-37.

—— 1898 E

Occurrence of mammoth remains on the Pribilof Islands.

Science (n.s.), VIII, 718.

—— 1900 B

Abstract in Geol. Centralbl., II, 120.

—— 1900 D

Abstract in Geol. Centralbl., II, 762.

—— 1900 E

Abstract in Geol. Centralbl., II, 763.

—— 1900 F

Abstract in Geol. Centralbl., II, 765.

Lucas, F. A.—Continued 1900 G

Description of a new species of fossil fish from the Esmeralda formation.

Rep. U. S. Geol. Surv., XXI, pt. ii, 223-224, pl. xxxi.

Abstracts in Geol. Centralbl., II, 90; Neues Jahrb. Min. Geol. Pal., 1901, II, Ref., 477; Rev. crit. Paléozool., V, 157.

—— 1900 H

Vertebrate fossils found in Idaho beds.

Rep. U. S. Geol. Surv., XX, pt. iii, 99.

—— 1901 A

Former land connections between Asia and North America.

Science (n.s.), XIII, 307.

—— 1901 B

Vertebrates from the Trias of Arizona.

Science (n.s.), XIV, 376.

Abstract in Geol. Centralbl., III, 99.

—— 1901 C

The phylogeny of the toothed whales.

Science (n.s.), XIV, 618-619.

—— 1901 D

A new dinosaur, *Stegosaurus marshi*, from the Lower Cretaceous of South Dakota.

Proc. U. S. Nat. Mus., XXIII, 591-592, pls. xxiii, xxiv.

Abstracts in Geol. Centralbl., II, 764; Neues Jahrb. Min. Geol. Pal., 1901, II, Ref., 475; Rev. crit. Paléozool., VI, 10.

—— 1901 E

A flightless auk, *Mancalla californiensis*, from the Miocene of California.

Proc. U. S. Nat. Mus., XXIV, 133-134, 3 text-figs.

Abstracts in Geol. Centralbl., III, 118; Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 460; Rev. crit. Paléozool., VI, 101; Naturw. Wochenschr., XVII (N.F.), 379.

—— 1901 F

The restoration of extinct animals.

Rep. Smithson. Instn. for 1900, 479-492, pls. i-viii, 2 text-figs.

—— 1901 G

A fossil, flightless auk.

Science (n.s.), XIII, 428-429.

—— 1901 H

Some restorations of dinosaurs.

Science (n.s.), XIII, 586.

Lucas, F. A.—Continued 1901 I

The truth about the mammoth.

Rep. Smithson. Instn., for 1899, 353-359, pls. i-iv.

Reprinted from McClure's Magazine, Feb. 1900.

—— 1901 J

Animals of the past.

8vo., New York, i-xx+1-258 pages, 41 figs.

Review in Science (n.s.), xxxviii, 779-780.

—— 1902 A

Paleontological notes. North American elephantids.

Science (n.s.), xv, 554-555.

Brief notice in Geol. Centralbl., ix, 581.

—— 1902 B

Animals before man in North America.

New York, D. Appleton Co., 8vo., 1-291 pages, many figures.

—— 1902 C

The dinosaurs, or terrible lizards.

Rep. Smithson. Instn. for 1901, 641-647, pls. i-iv.

Abstract in Rev. crit. Paléozool., viii, 11-12.

—— 1902 D

The greatest flying creature, the great pterodactyl *Ornithostoma.*

Rep. Smithson. Instn. for 1901, 654-659, pls. vi-vii, 1 text-fig.

Abstracts in Geol. Centralbl., ix, 582; Neues Jahrb. Min. Geol. Pal., 1905, i, Ref., 516.

Reprinted in Scient. Amer. Suppl., lv, 22645-22646.

—— 1902 E

The armor of *Stegosaurus.*

Science (n.s.), xv, 469.

—— 1902 F

Paleontological notes. The generic name *Omosaurus.*

Science (n.s.), xvi, 435.

Proposes *Hoplitosaurus* for *Stegosaurus marshi.*

Abstract in Geol. Centralbl., ix, 582.

—— 1902 G

Orange County mastodons.

Science (n.s.), xvi, 669.

—— 1902 H

Clark on the classification of birds.

Auk, xix, 95-96.

—— 1902 I

Constructing an extinct monster from fossil remains.

Scient. Amer., lxxxvi, 43, 3 text-figs.

Lucas, F. A.—Continued 1902 J

Note on fossil horse teeth found in Alaska.

U. S. Geol. Surv. Profess. Pap., ii, 27.

—— 1903 A

Notes on the osteology and relationship of the fossil birds of the genera *Hesperornis, Hargeria, Baptornis,* and *Diatryma.*

Proc. U. S. Nat. Mus., xxvi, 545-556, 8 text-figs.

Abstracts in Geol. Centralbl., v, 327; Rev. crit. Paléozool., viii, 5.

—— 1903 B

The great auk.

Science (n.s.), xvii, 311-312.

—— 1903 C

A skeleton of *Hesperornis.*

Smithson. Misc. Coll., xlv, 95, pl. xxvii.

Abstract in Geol. Centralbl., v, 376; also in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 173.

—— 1903 D

A new plesiosaur.

Smithson. Misc. Coll., xlv, 96, pl. xxviii.

Abstracts in Geol. Centralbl., v, 377; Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 167; Rev. crit. Paléozool., ix, 126.

—— 1904 A

A new batrachian and a new reptile from the Trias of Arizona.

Proc. U. S. Nat. Mus., xxvii, 193-195, pls. iii, iv.

Abstracts in Geol. Centralbl., v, 377; Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 162; Rev. crit. Paléozool., viii, 157.

—— 1904 B

Paleontological notes.

Science (n.s.), xix, 436-437.

—— 1904 C

The dinosaur *Trachodon annectans.*

Smithson. Misc. Coll., xlv, 317-320, pls. lxxii, lxxiii, text-figs. 40-43.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 172; Geol. Centralbl., vii, 427; Rev. crit. Paléozool., ix, 121.

—— 1904 D

Eocene whales.

Nature, lxxi, 102.

Abstract in Geol. Centralbl., ix, 581.

—— 1904 E

The swallowing of stones by seals.

Science (n.s.), xx, 537-538.

—— 1904 F

List of vertebrate bones in Nampa [Idaho] quadrangle.

Folio U. S. Geol. Surv., ciii, 1-5, 2 maps.

Lucas, F. A.—Continued 1906 A

The elephants of the Pleistocene.

Maryland Geol. Surv. Pliocene and Pleistocene, Baltimore, 1906, 149-152, pls. xxxii, xxxiii.

Abstract in Geol. Centralbl., XI, 382.

—— 1906 B

Mammalia [of the Pleistocene of Maryland].

Maryland Geol. Surv. Pliocene and Pleistocene, Baltimore, 1906. 157-169, pls. xxxiv-xl.

—— 1906 C

Notes on some recent additions to the exhibition series of vertebrate fossils in the U. S. National Museum.

Science (n.s.), XXIII, 955.

—— 1906 D

The penguins.

Science (n.s.), XXIV, 316-317.

—— 1907 A

Momentum in variation.

Amer. Naturalist, XLI, 46-47.

A criticism of Loomis, F. B., 1905 B.

—— 1907 B

The tusks and size of the northern mammoth.

Science (n.s.), XXVI, 836-837.

—— 1908 A

Is *Alabamornis* a bird?

Science (n.s.), XXVII, 311.

—— 1908 B

The size of the mammoth.

Nature, LXXVIII, 443.

Abstracts in Geol. Centralbl., XII, 297; Sci. Progress, III, 456.

—— 1910 A

The armour of *Stegosaurus.*

Nature, LXXXV, 73.

Abstract in Sci. Progress, V, 682.

—— 1910 B

Remark on *Alabamornis.*

Nature, LXXXV, 278.

—— 1911 A

Note on the ribs of *Brachiosaurus.*

Nature, LXXXVII, 18.

—— 1916 A

The beginnings of flight.

Amer. Mus. Jour., XVI, 5-11, 9 ills.

—— 1916 B

Sea cows, past and present.

Amer. Mus. Jour., XVI, 315-318, 3 figs.

Lühder, Wilhelm 1871 A

Zur Bildung des Brustbeins und Schultergürtels der Vögel.

Jour. Ornith., XIX, 321-353.

Lütken, Christian 1868 C

Om Ganoidernes Begraendsning og Inddeling.

Vid. Medd. nat. For. Kjöbenh., 1868, 1-82, 14 text-figs.

For a résumé by the author see Arch. Sci. Phys. Nat., IV, 1871, 283-296; Abstracts in Neues Jahrb. Min. Geol. Pal., 1870, 594-603; Ann. Mag. Nat. Hist. (4), VII, 329-339.

—— 1871 A

Sur les limites et la classification des ganoides.

Arch. Sci. Phys. Nat., XL, 283-296.

—— 1874 A

Sur les différences dans la dentition que présentent, selon le sexe, les raies (*Raja*) qui habitent les côtes du Danemark.

Jour. Zool. Paris, III, 318-321.

Abstract of paper in Vid. Medd. Nat. Kjöbenh., 1873.

—— 1881 A

Spolia atlantica: Contributions to the knowledge of the changes of form in fishes during their growth and development, especially in the pelagic fishes of the Atlantic.

Ann. Mag. Nat. Hist. (5), VII, 1-14; 107-123.

Lull, Richard S. 1903 A

Skull of *Triceratops serratus.*

Bull. Amer. Mus. Nat. Hist., XIX, 685-695, pls. lix, lx, 1 text-fig.

Abstract in Geol. Centralbl., V, 376; Jahresber. Anat. Entwickl. (N.F.) X, Abth. 3, 172.

—— 1904 A

Fossil footprints of the Jura-Trias of North America.

Mem. Boston Soc. Nat. Hist., V, 461-557, pl. lxxii, 34 text-figs.

An abstract of this paper by its author is found in the Amer. Jour. Sci. (4), XVII, 402-405. See also abstract in Geol. Centralbl., VII, 619.

—— 1904 B

Note on the probable footprints of *Stegomus longipes.*

Amer. Jour. Sci. (4), XVII, 381-382, 1 text-fig.

Abstract in Geol. Centralbl., VII, 427.

Lull, Richard S.—Continued 1904 C

Adaptations to aquatic, arboreal, fossorial and cursorial habits in mammals. IV: Cursorial adaptations.

Amer. Naturalist, XXXVIII, 1-11.

Abstract in Neues Jahrb. Min. Geol. Pal., 1906, I, Ref., 138-139.

—— 1904 D

Nature's hieroglyphics.

Pop. Sci. Month., LXVI, 139-149, 7 figs.

Abstract in Geol. Centralbl., IX, 582.

—— 1905 A

Restoration of the horned dinosaur *Diceratops*.

Amer. Jour. Sci. (4), XX, 420-422, pl. XIV.

Abstracts in Geol. Centralbl., VIII, 378; XI, 108; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 143; Nature, LXXIII, 205.

—— 1905 B

Restoration of the titanothere *Megacerops*.

Amer. Naturalist, XXXIX, 419-424, 3 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 173.

—— 1905 C

Footprint interpretation.

Science (n.s.), XXI, 299.

—— 1905 D

Megacerops tyleri, a new species of titanothere from the Bad Lands of South Dakota.

Jour. Geol., XIII, 443-456, pls. III, IV, 2 text-figs.

Abstracts in Geol. Centralbl., VIII, 378; Jahresber. Anat. Entwickl. (N.F.), XI, pt. 3, 173.

—— 1906 A

A new name for the dinosaurian genus *Ceratops*.

Amer. Jour. Sci. (4), XXI, 144.

Abstracts in Geol. Centralbl., VIII, 378; Nature, LXXIII, 1906, 422; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 142.

—— 1906 B

Volant adaptation in vertebrates.

Amer. Naturalist, XL, 537-566, 14 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 122-123; Geol. Centralbl., XI, 425; Nature, London, LXXIV, 415.

—— 1907 A

The evolution of the horse family, as illustrated in the Yale collections.

Amer. Jour. Sci. (4), XXIII, 161-182, 16 text-figs.

Abstracts in Geol. Centralbl., XI, 472; Rev. crit. Paléozool., XI, 220; Sci. Progress, II, 510.

Lull, Richard S.—Continued 1907 B

Phylogeny, taxonomy, distribution, habits and environment of the *Ceratopsia*.

Mon. U. S. Geol. Surv., XLIX, 159-198; 295-300; pls. I-LI, text-figs. 121-125.

Abstracts in Rev. crit. Paléozool., XIII, 76; Amer. Jour. Sci. (4), XXVI, 98-99; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 160.

—— 1908 A

The evolution of the elephant.

Amer. Jour. Sci. (4), XXV, 169-212, figs. 1-27, 4 charts.

Notes in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 136; Rev. crit. Paléozool., XII, 235.

Abstracts in Geol. Centralbl., XIII, 203; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 162.

—— 1908 B

The cranial musculature and the origin of the frill in the ceratopsian dinosaurs.

Amer. Jour. Sci. (4), XXV, 387-399, pls. I-III, 10 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 450; Nature, LXXVIII, 109; Sci. Progress, III, 460; Rev. crit. Paléozool., XIII, 10-11.

—— 1908 C

A comparative study of the musculature of the chameleon and a chelonian.

Science (n.s.), XXVII, 255.

—— 1909 A

The evolution of the elephant.

Rep. Smithson. Instn. for 1908, 641-675, pls. I, II, 25 text-figs., 4 charts.

Abstract in Sci. Progress, IV, 663.

—— 1909 B

A four-horned pelycosaurian from the Permian of Texas.

Amer. Jour. ci. (4), XXVII, 93.

Review of W. D. Matthew's paper under above title (Matthew, W. D., 1908 B).

—— 1910 A

Dinosaurian distribution.

Amer. Jour. Sci. (4), XXIX, 1-39, 10 text-figs.

The paper is followed by a list of works on the *Dinosauria*.

Abstracts in Geol. Centralbl., XV, 311; Nature, London, LXXXV, 1900, 285; Sci. Progress, V, 677-678; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 299; Rev. crit. Paléozool., XIV, 175; Nature, LXXXII, 437.

Lull, Richard S.—Continued 1910 B

Armor of *Stegosaurus*.

Amer. Jour. Sci. (4), xxix, 201-210, 11 text-figs.

Abstracts in Geol. Centralbl., xv, 311; Neues Jahrb. Min. Geol. Pal., 1910, ii, Ref., 289; Rev. crit. Paléozool., xiv, 174; Nature, lxxxvii, 137; Sci. Progress, v, 681.

—— 1910 C

Stegosaurus ungulatus Marsh, recently mounted at the Peabody Museum of Yale University.

Amer. Jour. Sci. (4), xxx, 361-377, pl. ii, 10 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, i, Ref., 320; Geol. Centralbl., xvi, 218; Sci. Progress, v, 681; Rev. crit. Paléozool., xv, 147-149.

—— 1910 D

Relation of embryology and vertebrate paleontology.

Pop. Sci. Month. lxxvii, 150-153.

Abstracts in Nature, lxxxiv, 211; Rev. crit. Paléozool., xxi, 42.

—— 1911 A

Note on the parietal crest of *Centrosaurus apertus* and a proposed new name for *Stereocephalus tutus;* by Lawrence M. Lambe.—A review.

Amer. Jour. Sci. (4), xxxi, 339.

—— 1911 B

The Reptilia of the Arundel formation.

Maryland Geol. Surv. Lower Cretaceous, 173-178.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, ii, Ref., 146-147; Geol. Centralbl., xviii, 523; Rev. crit. Paléozool., xviii, 1.

—— 1911 C

Systematic paleontology of the Lower Cretaceous deposits of Maryland. Dinosauria.

Maryland Geol. Surv. Lower Cretaceous, 183-211, pls. xi-xx.

Abstracts in Geol. Centralbl., xvii, 562-567; xviii, 515; Neues Jahrb. Min. Geol. Pal., 1912, ii, Ref., 121; Rev. crit. Paléozool., xviii, 2.

—— 1912 A

Symposium on ten years' progress in vertebrate paleontology. Cretaceous dinosaurs.

Bull. Geol. Soc. Amer., xxiii, 208-212.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Hay, Merriam, Dean, Eastman, Osborn, Williston and Sinclair.

Abstract in Rev. crit. Paléozool., xvii, 73.

Lull, Richard S.—Continued 1912 B

The evolution of the Ceratopsia.

Proc. Internat. Zool. Congr., vii, Boston, 1907, 771-777.

Reprints were evidently issued in 1910, before the complete volume.

Abstracts in Nature, lxxxiv, 1910, 89; Neues Jahrb. Min. Geol. Pal., 1910, ii, Ref., 301; Rev. crit. Paléozool., xv, 154-155.

—— 1912 C

The armored dinosaur *Stegosaurus ungulatus*, recently restored at Yale University.

Verh. internat. Zool.-Kongr., viii, Graz, 1910, 672-681, 4 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1912, ii, Ref., 148.

—— 1912 D

The life of the Connecticut Trias.

Amer. Jour. Sci. (4), xxxiii, 397-422, 5 figs.

There is a list of the fishes from Eastman, C. R., 1911 A; also a bibliography of 13 titles.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, ii, 120; Geol. Centralbl., xviii, 559; Rev. crit. Paléozool., xvii, 77.

—— 1913 A

The Yale collection of fossil horses.

Coll. Yale Univ., No. 1, 1-12, 11 text-figs.

—— 1913 B

The Yale expedition of 1912.

Bull. Geol. Soc. Amer., xxiv, 117.

—— 1914 A

Fossil dolphin from California.

Amer. Jour. Sci. (4), xxxvii, 209-220, pl. viii, 7 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, i, Ref., 137-138; Geol. Zentralbl., xxi, 238; Nature xcv, 355.

—— 1914 B

Note on the Farmington [Conn.] specimen [of *Mammut americanum*].

Amer. Jour. Sci. (4), xxxvii, 329-330.

Abstracts in Rev. crit. Paléozool., xviii, 153; Bull. Geol. Soc. Amer., xxv, 143.

—— 1914 C

New mastodon find in Connecticut.

Bull. Geol. Soc. America, xxv, 143.

A brief abstract.

—— 1914 D

Rulers of the Mesozoic.

Yale Review (n.s.), iii, 352-363.

—— 1914 E

Elephants and their progenitors.

Sci. Conspectus, iv, 61-70, 2 pls., 8 figs.

Lull, Richard S.—Continued 1915 A

Triassic life of the Connecticut valley.

Bull. Geol. and Nat. Hist. Surv. Conn., XXIV, 1-285, 12 plates, 4 maps, 126 figures.

There are presented lists of the species of vertebrates found at each of 42 localities.

Abstract in Nature, London, XCVI, 657; Rev. crit. Paléozool., XX, 90.

For Lull's list of species see Abel, O., 1926 B, 25-27.

——— 1915 B

A Pleistocene ground sloth, *Mylodon harlani*, from Rock Creek, Texas.

Amer. Jour. Sci. (4), XXXIX, 327-385, 16 text-figs.

Abstracts in Rev. crit. Paléozool., XX, 88; Geol. Zentralbl., XXV, 271.

——— 1915 C

Sauropoda and Stegosauria of the Morrison of North America compared with those of Europe and eastern Africa.

Bull. Geol. Soc. Amer., XXVI, 323-334.

Abstract in Rev. crit. Paléozool., XX, 3.

——— 1915 D

The mammals and horned dinosaurs of the Lance formation of Niobrara County, Wyoming.

Amer. Jour. Sci. (4), XL, 319-348, 5 text-figs.

Abstract in Geol. Zentralbl., XXV, 272.

——— 1915 E

Ant-hill fossils.

Pop. Sci. Month., 1915, 236-243, 4 text-figs.

——— 1915 F

Dinosaurs, the rulers of the Mesozoic.

Schuchert and Pirsson's "Text-book of Geology." 831-843, pls. xxxi-xxxiii.

——— 1915 G

Review of Williston's "Water reptiles of the past and present."

Science (n.s.), XLI, 391-392.

——— 1917 A

On the functions of the "sacral brain" in dinosaurs.

Amer. Jour. Sci. (4), XLIV, 471-477.

Abstract in Rev. crit. Paléozool., XXIV, 88.

——— 1917 B

Organic evolution. A text-book.

8vo., i-xviii+1-729 pages, pls. i-xxx, 253 text-figs.

Abstract in Rev. crit., Paléozool., XXII, 51-55. Brief review in Jour. Geol., XXVI, 285.

Lull, Richard S.—Continued 1917 C

Barosaurus: A gigantic sauropod dinosaur.

Bull. Geol. Soc. Amer., XXVIII, 214 (abstract).

——— 1917 D

The Triassic fauna and flora of the Connecticut valley.

Bull. U. S. Geol. Surv., DXCVII, 105-127, pls. iii, iv.

——— 1917 E

Horned artiodactyl from the Tertiary of Nebraska.

Bull. Geol. Soc. Amer., XXVIII, 211.

——— 1917 F

Brontotherium: A new mount in the Yale Museum.

Bull. Geol. Soc. Amer., XXVIII, 214 (abstract).

——— 1918 A

Fossil footprints from the Grand Canyon of the Colorado.

Amer. Jour. Sci. (4), XLV, 337-346, pls. i-iii, 3 text-figs.

Abstracts in Rev. crit. Paléozool., XXII, 107; Geol. Zentralbl., XXV, 43.

——— 1918 B

The development of vertebrate paleontology.

Amer. Jour. Sci. (4), XLVI, 193-221.

——— 1918 C

The pulse of life.

Chap. IV, 109-146, figs. 14-30, of "The Evolution of the Earth and its Inhabitants." 8vo., New Haven, 1918.

——— 1919 A

Samuel Wendell Williston.

Amer. Jour. Sci. (4), XLVIII, 220-224.

An obituary notice.

——— 1919 B

Review of papers by C. W. Gilmore (Gilmore, C. W., 1914 A and 1918 C).

Amer. Jour. Sci. (4), XLVII, 236-238.

——— 1919 C

The sauropod dinosaur *Barosaurus* Marsh.

Mem. Conn. Acad. Sci., VI, 1-42, pls. i-vii, 10 text-figs.

Abstracts in Rev. crit. Paléozool., XXIV, 147; Neues Jahrb. Min. Geol. Pal., 1922, I, Ref., 253; Nature, CV, 117.

——— 1920 A

New Tertiary artiodactyls.

Amer. Jour. Sci. (4), L, 83-130, pl. i, 25 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 388; Rev. Géol. et Sci. conn., IV, 1923, 98; Geol. Zentralbl., XXVI, 505; Nature, CVI, 189.

Review in Rev. crit. Paléozool., XXVII, 16.

Lull, Richard S.—Continued 1920 B

An Upper Carboniferous footprint from Attleboro, Massachusetts.

Amer. Jour. Sci. (4), L, 234-236, 1 fig.

Abstract in Rev. Géol. et Sci. conn., IV, 1923, 95; Nature, CVIII, 482.

Review in Rev. crit. Paléozool., XXVII, 13.

—— 1921 A

The Cretaceous armored dinosaur *Nodosaurus textilis* Marsh.

Amer. Jour. Sci. (5), I, 98-126, pls. i-iv, 7 text-figs.

The bibliography records 16 titles.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1922, I, Ref., 254; Rev. Géol. et Sci. conn., IV, 1923, 95; Geol. Zentralbl., XXVIII, 507.

Review in Rev. crit. Paléozool., XXVII, 13.

—— 1921 B

Fauna of the Dallas sand pits.

Amer. Jour. Sci. (5), II, 159, 176, figs. 1-5.

Abstract in Rev. Géol. et Sci. conn., IV, 1923, 99; Geol. Zentralbl., XXVII, 184.

Review in Rev. crit. Paléozool., XXVII, 17.

—— 1921 C

New camels in the Marsh collection.

Amer. Jour. Sci. (5), I, 392-404, figs. 1-5.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 388; Rev. Géol. et Sci. conn., IV, 1923, 99; Geol. Zentralbl., XXVII, 29.

Review in Rev. crit. Paléozool., XXVII, 17.

—— 1922 A

Restoration of *Blastomeryx marshi*.

Amer. Jour. Sci. (5), III, 158-161, 2 figs.

Abstracts in Rev. Geol. et Sci. conn., V, 111; Rev. crit. Paléozool., XXVIII, 6, 1924; Geol. Zentralbl., XXVIII, 153; Neues Jahrb. Min. Geol. Pal., 1923, I, 317-318.

—— 1922 B

Primitive Pecora in the Yale Museum.

Amer. Jour. Sci. (5), IV, 111-119, 1 fig.

There is a bibliography of 9 titles. Abstracts in Rev. Géol. et Sci. conn., V, 110-111; Rev. crit. Paléozool., XXVII, 214; XXVIII, 6; Neues Jahrb. Min. Geol. Pal., 1924, I, 414; Geol. Zentralbl., XXIX, 221.

—— 1922 C

Variations or specific distinctions: Which?

Bull. Geol. Soc. Amer., XXXIII, 599, 604.

—— 1922 D

Abstract of Branislaw Petronievics' "Über das Becken, den Schultergürtel, etc., der Londoner *Archæopteryx*."

Amer. Jour. Sci. (4), III, 382-383.

Lull, Richard S.—Continued 1924 A

Dinosaurian climatic response.

Chapter VII of *"Organic adaptation to environment."* New Haven. Yale University Press. Pages 225-279, figs. 22-34, and chart.

The bibliography comprises 40 titles.

Abstract in Geol. Zentralbl., XXXII, 507.

—— 1924 B

Samuel Wendell Williston, 1852-1918.

Mem. Nat. Acad. Sci., XVII, 115-141, portrait.

Pages 136-141 are occupied by lists of his scientific papers. Of these 12 are concerned with geology; 9 with anthropological questions, 138 with vertebrate palæontology.

—— 1926 A

Early fossil hunting in the Rocky Mountains.

Nat. Hist., XXVI, 455-462, 5 figs.

—— 1926 B

Yale's great new museum of evolution.

Scient. Amer., Oct. 1926, 278-279, illustrations.

—— 1927 A

A new footprint locality.

Amer. Jour. Sci. (5), XIV, 48, 49, fig. 1.

—— See also **Huene** and **Lull**.

Lund, Peter Wilhelm 1838 A

[A brief report on the investigations of the fossil mammals of the caves of Minas Geraes, Brazil.]

Danske Vidensk. Selsk. Forh. Overs., 1838, 7-15.

—— 1839 C

[A brief report on further investigations of the fossil mammals of the caves of Minas Geraes, Brazil.]

Danske Vidensk. Selsk. Forh. Overs., 1839, 19-23.

—— 1841 A

Blik paa Brasiliens Dryeverden för sidste Jordomvaeltning.

Danske Vid. Selsk. Afhandl., VIII, 27-57, 61-86, 217-296, pls. i-xxvii.

Lurje, Mira 1906 A

Über die Pneumatisation des Taubenschädels.

Anat. Hefte, Arb., XXXI, 1-61, pls. i-x, 1 fig.

The bibliography includes 11 titles.

Luthe, Walter 1924 A

Ueber die Fusswurzelknochen der Fischottern.

Arch. Naturges, XC, Abt. A, Heft 4, 59-141, pls. i-vii, 7 text-figs.

The bibliography presents 16 titles.

Luther, A. 1909 A
Beiträge zur Kenntnis von Muskulatur und Skelett des Kopfes des Haies *Stegostoma tigrinum* Gm. und der Holocephalen; mit einem Anhang über die Nasenrinne.
There is a bibliography of 73 titles.

—— 1913 A
Beiträge zur Kenntnis des Kopfskelets der Knorpelganoiden.
Acta. Soc. Sci. Fenn., XLI, art. 8, 1-26, 10 text-figs.
A bibliography of 40 titles is appended.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 77-80.

—— 1913 B
Ueber die vom N. trigeminus versorgte Muskulatur der Ganoiden und Dipneusten.
Acta Soc. Sci. Fenn., XLI, art. 9, 1-72, 1 pl., 28 text-figs.
There is appended a bibliography of 77 titles.

Lwoff, W. 1884 A
Beiträge zur Histologie der Haut der Reptilien.
Bull. Soc. Natural. Moscou, LX, 313-334, pl. ix.

Lydekker, R. 1879 A
Elementary sketch of the osteology of birds.
Stray Feathers, Calcutta, VIII, 1-36, 4 pls.

—— 1882 B
Siwalik Camelopardalidæ.
Mem. Geol. Surv. India. Palæont. Indica (ser. 10), II, 99-142 (33-44), pls. xvi-xxii.

—— 1884 C
See Hay, O. P., 1902 A, p. 147.
Reviewed in Ann. Mag. Nat. Hist. (5), XVI, 66-72.

—— 1885 F
The labyrinthodont from the Bijori Group.
Palæont. Ind. (4), I, pt. 4, 1-16, pls. l-lv.

—— 1885 G
The Reptilia and Amphibia of the Maleri and Denwa groups.
Palæont. Ind. (4), I, pt. 5, 1-38, pls. i-vi.

—— 1886 F
On the occurrence of the crocodilian genus *Tomistoma* in the Miocene of the Maltese Islands.
Quart. Jour. Geol. Soc., XLII, 20-22, pl. ii.

—— 1886 G
M. L. Dollo on new chelonians from the Eocene of Belgium.
Geol. Mag. (3), III, 521-523.

Lydekker, R.—Continued 1887 B
The Cetacea of the Suffolk Crag.
Quart. Jour. Geol. Soc., XLIII, 7-18, pl. ii, 2 text-figs.

—— 1887 C
Note on the Hordwell and other crocodilians.
Geol. Mag. (3), IV, 307-312.

—— 1887 D
Description of a jaw of *Hyotherium* from the Pliocene of India.
Quart. Jour. Geol. Soc., XLIII, 19-22, 1 fig.

—— 1887 E
On certain dinosaurian vertebræ from the Cretaceous of India and the Isle of Wight.
Quart. Jour. Geol. Soc., XLIII, 156-160, 1 fig.

—— 1888 F
Note on the nomenclature of three genera of fossil Mammalia.
Ann. Mag. Nat. Hist. (6), I, 384.

—— 1889 M
Preliminary notice of new fossil Chelonia.
Ann. Mag. Nat. Hist. (6), III, 53-54.

—— 1889 N
Note on a chelonian humerus from the Middle Eocene of Bracklesham.
Proc. Geol. Assoc., XI, 177-179.

—— 1891 A
Catalogue of the fossil birds in the British Museum.
London, i-xxvii+1-368 pages, 75 figs.
Review in Geol. Mag. (3), VIII, 378-381.

—— 1892 C
On zeuglodont and other cetacean remains from the Tertiary of the Caucasus.
Proc. Zool. Soc. Lond., 1892, 558-564, pls. xxxvi-xxxviii.

—— 1893 F
Note on the coracoidal element in adult sloths, with remarks on its homology.
Proc. Zool. Soc. Lond., 1893, 172-174, 3 text-figs.

—— 1894 B
The La Plata Museum.
Nat. Sci., IV, 26-35; 117-128.

—— 1896 C
A hand-book to the Marsupialia and Monotremata.
Lloyd's Natural History Ser. 8vo., i-xvi+1-320 pages, 38 colored plates. The same published in 1894 formed a part of "Allen's Natural History." London.
Notice of in Nat. Sci., V, 135.

Lydekker, R.—Continued 1896 D

A handbook to the Carnivora. Pt. I: Cats, civets and mongooses.

London, i-viii+1-312 pages, pls. i-xxxii. Edited by R. Bowlder Sharpe. Part of "Lloyd's Natural History Series."

——— 1896 E

Recent discoveries in avian palæontology.

Sci. Progress, v, 398-416.

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—— 1910 C

The sheep and its cousins.

London, 8vo., i-xv+1-315 pages, 24 pls., 11 text-figs.

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Describes *Bison kansensis* sp. nov.

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Tooth of *Elephas columbi*, Amboy, Ohio.

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Contributions to the Pleistocene history of Oregon.

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—— 1918 D

On some fossil bisontines of eastern Asia.

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—— 1921 A

Descriptions of some new fossil mammals from Kani District, Prov. of Mino, with revisions of some Asiatic fossil rhinocerotids.

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—— 1924 A

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Sci. Rep. Tohoku Imp. Univ. (2, Geol.), X, No. 1, 17-27, pls. viii-x, 5 text-figs.

—— 1926 C

On some new fossil cervicorns from Kazusa and Liukiu.

Sci. Rep. Tohoku Imp. Univ. (2, Geol.), No. 2, X, 17-25, pl. xi (i).

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—— 1927 A

On *Bison exguus* and its ancestry.

Sci. Rep. Tohoku Imp. Univ. (2, Geol.), X, 51-55, pls. xxv, xxvi.

Matthes, Ernst 1912 A

Einige Bemerkungen über das Gehörgan von Walen und Sirenen.

Anat. Anz., XLI, 594-599.

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—— 1912 B

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There is a bibliography of 29 titles.

—— 1921 B

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Bull. Nat. Hist. Soc. N. Brunsw., V, 102.

—— 1903 B

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—— 1903 C

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Canad. Rec. Sci., IX, 99-111, 1 plate.
For brief abstract see Neues Jahrb. Min. Geol. Pal., 1905, I, 339.

—— 1903 D

An attempt to classify Palæozoic batrachian footprints.

Trans. Roy. Soc. Canada (2), IX, sec. iv, 109-116, pls. i-iii.
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Matthew, George F.—Continued 1904 A

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Trans. Roy. Soc. Canada (2), X, sec. iv, 77-122, pls. i-vi.
Abstracts in Geol. Centralbl., VI, 716; Rev. crit. Paléozool., IX, 128-129.

—— 1904 B

Note on the genus *Hylopus* of Dawson.

Bull. Nat. Hist. Soc. N. Brunsw., V, 247-252, 1 text-fig.
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—— 1907 A

A new genus and a new species of Silurian fish.

Trans. Roy. Soc. Canada (3), I, sec. iv, 7-9, 1 plate.
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—— 1910 A

Remarkable forms of the Little River group.

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Matthew, W. D. 1899 A

A provisional classification of the freshwater Tertiary of the West.

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—— 1901 A

Additional observations on the Creodonta.

Bull. Amer. Mus. Nat. Hist., XIV, 1-38, text-figs. 1-17.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 430-434; Geol. Centralbl., III, 115; Rev. crit. Paléozool., VII, 8.

—— 1901 B

Fossil mammals of the Tertiary of northeastern Colorado.

Mem. Amer. Mus. Nat. Hist., I, 355-448, pls. xxxvii-xxxix, text-figs. 1-34.

Besides the systematic descriptions, this paper presents a discussion of the stratigraphy of the region and lists of the genera and species which have been found in the various beds.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 123-134; Geol. Centralbl., III, 117.

Matthew, W. D.—Continued 1902 A

A skull of *Dinocyon* from the Miocene of Texas.

Bull. Amer. Mus. Nat. Hist., XVI, 129-136, 4 figures.

Abstract in Geol. Centralbl., IV, 400; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 126.

—— 1902 B

On the skull of *Bunœlurus*, a musteline from the White River Oligocene.

Bull. Amer. Mus. Nat. Hist., XVI, 137-140, 3 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 296; Geol. Centralbl., IV, 399.

—— 1902 C

New Canidæ from the Miocene of Colorado.

Bull. Amer. Mus. Nat. Hist., XVI, 281-290, 4 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 294-296; Geol. Centralbl., IV, 400; Rev. crit. Paléozool., VIII, 6-7.

—— 1902 D

A horned rodent from the Colorado Miocene, with a revision of the *Mylagauli*, beavers, and hares of the American Tertiary.

Bull. Amer. Mus. Nat. Hist., XVI, 291-310, 17 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 301-303; Geol. Centralbl., IV, 401; Rev. crit. Paléozool., VIII, 7; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 117.

—— 1902 E

The skull of *Hypisodus*, the smallest of the Artiodactyla, with a revision of the Hypertragulidæ.

Bull. Amer. Mus. Nat. Hist., XVI, 311-316, 4 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 141-142; Geol. Centralbl., IV, 400; Rev. crit. Paléozool., VIII, 5; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 123.

—— 1902 F

List of the Pleistocene fauna from Hay Springs, Nebraska.

Bull. Amer. Mus. Nat. Hist., XVI, 317-322.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 296-297; Rev. crit. Paléozool., VIII, 8; Geol. Centralbl., IV, 393; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 113.

—— 1902 G

The hall of fossil vertebrates.

Amer. Mus. Jour., Suppl., II, 2-19, 11 plates.

Matthew, W. D.—Continued 1902 H

News notes.

Amer. Mus. Jour., II, 40, 41. An unsigned article.

—— 1903 A

The evolution of the horse.

Amer. Mus. Jour. Suppl., III, No. 1 (Guide leaflet No. 9), 1-30, 7 plates; 4 text-figs.

A second edition was issued in 1909.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 462-463; Geol. Centralbl., V, 461; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 175.

—— 1903 B

The fauna of the Titanotherium beds at Pipestone Springs, Montana.

Bull. Amer. Mus. Nat. Hist., XIX, 197-226, 19 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 460-462; Geol. Centralbl., V, 375; Rev. crit Paléozool., VIII, 6; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 179.

—— 1903 C

A fossil hedgehog from the American Oligocene.

Bull. Amer. Mus. Nat. Hist., XIX, 227-230, 1 fig.

Abstracts in Geol. Centralbl., VI, 55; Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 179; Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 472; Rev. crit. Paléozool., VIII, 6.

—— 1903 D

Concerning the ancestry of the dogs.

Science (n.s.), XVII, 912-913.

Abstract in Geol. Centralbl., VI, 55.

—— 1903 E

The collection of fossil vertebrates. A guide leaflet to the exhibition halls of vertebrate palæontology in the American Museum of Natural History.

Amer. Mus. Jour., Suppl. for January, III, 1-32, 15 plates.

Abstract in Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 175.

—— 1903 F

Second Cope collection.

Amer. Mus. Jour., III, 3-5.

An unsigned article.

—— 1904 A

A complete skeleton of *Merycodus*.

Bull. Amer. Mus. Nat. Hist., XX, 101-129, pl. iii, 21 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 311-314; Geol. Centralbl., VII, 426; Rev. crit. Paléozool., VIII, 152-153; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 190; Geol. Mag. (5), I, 518.

Matthew, W. D.—Continued 1904 B

Notice of two new Oligocene camels.

Bull. Amer. Mus. Nat. Hist., xx, 211-215.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 178; Geol. Centralbl., vii, 424; Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 301; Rev. crit. Paléozool., ix, 4.

—— 1904 C

New or little known mammals from the Miocene of South Dakota. American Museum Expedition of 1903. Pt. II: Carnivora and Rodentia.

Bull. Amer. Mus. Nat. Hist., xx, 246-265, figs. 1-13.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, ii, Ref., 127-130; Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 174-175; Geol. Centralbl., vii, 424.

—— 1904 D

The arboreal ancestry of the Mammalia.

Amer. Naturalist, xxxviii, 811-818.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1906, i, Ref., 139-140; Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 174; Rev. crit. Paléozool., ix, 180; Geol. Centralbl., vii, 618.

—— 1904 E

Exhibition of the series of foot bones illustrating the evolution of the camel, recently installed in the Hall of Vertebrate Paleontology of the American Museum of Natural History.

Science (n.s.), xix, 892.

—— 1904 F

The evolution of the camel.

Amer. Geologist, xxxiii, 397.

—— 1905 A

Notice of two new genera of mammals from the Oligocene of South Dakota.

Bull. Amer. Mus. Nat. Hist., xxi, 21-26, 6 figs.

Abstracts in Geol. Centralbl., viii, 373; Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 299-300; Rev. crit. Paléozool., ix, 118; Jahresber. Anat. Entwickl. (N.F.), xi, pt. 3, 172.

—— 1905 B

Notes on the osteology of *Sinopa*, a primitive member of the Hyænodontidæ.

Proc. Amer. Philos. Soc., xliv, 69-72.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 127-128; Geol. Centralbl., viii, 374.

—— 1905 C

On Eocene Insectivora and on *Pantolestes* in particular.

Science (n.s.), xxi, 298-299.

Matthew, W. D.—Continued 1905 D

Fossil carnivores, marsupials and small mammals.

Amer. Mus. Jour., v, 22-59, 27 figs.

Reprinted as Guide leaflet No. 17, 1-41, 27 figs.

Abstracts in Geol. Centralbl., vii, 617; Rev. crit. Paléozool., ix, 117.

—— 1905 E

The mounted skeleton of *Brontosaurus*.

Amer. Mus. Jour., v, 62-70, 4 figs.

Abstract in Geol. Centralbl., viii, 378.

—— 1906 A

Fossil Chrysochloridæ in North America.

Science (n.s.), xxiv, 786-788.

Abstract in Sci. Progress, ii, 506.

—— 1906 B

Hypothetical outlines of the continents in Tertiary times.

Bull. Amer. Mus. Nat. Hist., xxii, 353-383, 7 maps.

—— 1906 C

The osteology of *Sinopa*, a creodont mammal of the Middle Eocene.

Proc. U. S. Nat. Mus., xxx, 203-233, pl. xvi, text-figs. 1-20.

Abstracts in Geol. Centralbl., xi, 107; Sci. Progress, i, 450; Rev. crit. Paléozool., x, 198.

—— 1907 A

A lower Miocene fauna from South Dakota.

Bull. Amer. Mus. Nat. Hist., xxiii, 169-219, 26 figs.

Abstracts in Amer. Jour. Sci. (4), xxiv, 379-380; Science (n.s), xxviii, 921; Neues Jahrb. Min. Geol. Pal., 1911, i, Ref., 306-310; Sci. Progress, ii, 506; Geol. Centralb., xi, 380-381; Rev. crit. Paléozool., xi, 217.

—— 1907 B

The relationships of the "Sparassodonta."

Geol. Mag. (5), iv, 531-535.

—— 1907 C

The skeleton of the Columbian mammoth.

Amer. Mus. Jour., vii, 5-7.

An unsigned article.

—— 1907 D

Department of vertebrate palæontology; field expedition of 1906.

Amer. Mus. Jour., vii, 6-8.

An unsigned article.

—— 1907 E

The *Naosaurus* or "ship-lizard."

Amer. Mus. Jour., vii, 36-41, 2 figs.

An unsigned article.

Matthew, W. D.—Continued 1907 F

When brute force ruled the earth.

Discovery, New York, I, 42.

—— 1908 A

Osteology of *Blastomeryx* and phylogeny of the American Cervidæ.

Bull. Amer. Mus. Nat. Hist., XXIV, 535-562, figs. 1-13.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 136; Geol. Centralbl., XIII, 393; Rev. crit. Paléozool., XIII, 72; Amer. Jour. Sci. (4), XXVII, 93; Naturw. Rundschau, XXIV, 1909, 448; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 162; Sci. Progress, III, 454.

—— 1908 B

A four-horned pelycosaurian from the Permian of Texas.

Bull. Amer. Mus. Nat. Hist., XXIV, 183-185, 1 fig.

For abstracts see Neues Jahrb. Min. Geol. Pal., 1908, I, Ref., 285-286; Sci. Progress, III, 467; Amer. Jour. Sci. (4), XXVII, 93; Geol. Centralbl., XIII, 396.

—— 1908 C

Mammalian migrations between Europe and North America.

Amer. Jour. Sci. (4), XXV, 68-70.

Abstract in Geol. Centralbl., XIII, 394.

—— 1908 D

Revision of the Pelycosauria of North America. By E. C. Case.

Science (n.s.), XXVII, 816-818.

A review of Case, E. C., 1907 E.

—— 1908 E

Allosaurus, a carnivorous dinosaur, and its prey.

Amer. Mus. Jour., VIII, 3-5, fig.

Abstracts in Geol. Centralbl., XI, 332; Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 139.

—— 1908 F

Completion of *Trachodon* group.

Amer. Mus. Jour., VIII, 89.

—— 1908 G

Exhibition of *Orohippus osbornianus*.

Amer. Mus. Jour., VIII, 89.

—— 1908 H

Fossil fishes.

Amer. Mus. Jour., VIII, 110.

—— 1908 I

Exhibit illustrating the evolution of the horse.

Amer. Mus. Jour., VIII, 117-122, 5 text-figs.

Matthew, W. D.—Continued 1909 A

Observations upon the genus *Ancodon*.

Bull. Amer. Mus. Nat. Hist., XXVI, 1-7.

Abstracts in Geol. Centralbl., XVI, 220; Rev. crit. Paléozool., XIII, 72; Sci. Progress, IV, 660.

—— 1909 B

Report on skull of *Bison latifrons* in American Museum.

Science (n.s.), XXIX, 198.

—— 1909 C

Faunal lists of the Tertiary Mammalia of the West.

Bull. U. S. Geol. Surv., CCCLXI, 91-138.

Abstract in Rev. crit. Paléozool., XIII, 147-149.

—— 1909 D

The Carnivora and Insectivora of the Bridger basin, Middle Eocene.

Mem. Amer. Mus. Nat. Hist., IX, 291-567, pls. xlii-lii, text-figs. 1-118.

Abstracts in Amer. Jour. Sci. (4), XXVIII, 500; Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 503-519; Geol. Centralbl., XV, 217; Rev. crit. Paléozool., XIV, 163-168; Sci. Progress, IV, 654-657, figs. 1, 2.

—— 1909 E

On a skull of *Apternodus*.

Science (n.s.), XXIX, 196.

—— 1909 F

Recent purchases of fossil vertebrates.

Amer. Mus. Jour., IX, 68-69.

—— 1909 G

The oldest land reptiles of North America.

Amer. Mus. Jour., IX, 91-95, 5 text-figs.

—— 1910 A

On the skull of *Apternodus* and the skeleton of a new artiodactyl.

Bull. Amer. Mus. Nat. Hist., XXVIII, 33-42, pl. vi, 5 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1912, I, Ref., 356-358; Geol. Centralbl., XVII, 39; Sci. Progress, V, 665-666; Rev. crit. Paléozool., XIV, 168.

—— 1910 B

On the osteology and relationships of *Paramys*, and the affinities of the Ischyromyidæ.

Bull. Amer. Mus. Nat. Hist., XXVIII, 43-72, pls. i-v, 19 text-figs.

Abstracts in Geol. Centralbl., XVII, 38-39; Sci. Progress, V, 668-669; Rev. crit. Paléozool., XIV, 168; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 212.

Matthew, W. D.—Continued 1910 C

The phylogeny of the Felidæ.

Bull. Amer. Mus. Nat. Hist., xxviii, 289-316, 15 text-figs.

Reviews in Neues Jahrb. Min. Geol. Pal., 1912, i, Ref., 353-356; Geol. Centralbl., xvi, 214-215; Nature, lxxxv, 287; Sci. Progress, v, 666; Rev. crit. Paléozool., xv, 22; Amer. Jour. Sci. (4), xxx, 421-422; Jahresber. Anat. Entwickl. (N.F.), xviii, pt. 3, 211.

—— 1910 D

The pose of sauropodous dinosaurs.

Amer. Naturalist, xliv, 547-560.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, i, Ref., 323-325; Geol. Centralbl., xvii, 43; Nature, lxxxv, 288; Sci. Progress, v, 679.

—— 1910 E

Schlosser on Fayum mammals.

Amer. Naturalist, xliv, 700-703.

Abstract in Sci. Progress, v, 662-663.

—— 1910 F

The Tyrannosaurus.

Amer. Mus. Jour., x, 3-8, 6 figs.

—— 1910 G

Patagonia and the Pampas Cenozoic of South America. A critical review of the correlations of Santiago Roth, 1908.

Ann. N. Y. Acad. Sci., xix, 149-160, pl. xiv.

—— 1910 H

The continuity of development.

Pop. Sci. Month., lxxvii, 473-478.

Abstracts in Sci. Progress, v, 661; Rev. crit. Paléozool., xviii, 198.

—— 1910 I

The new plesiosaur. A great marine reptile of the ancient world.

Amer. Mus. Jour., x, 246-250, 4 plates.

—— 1911 A

Fort Lee dinosaur.

Amer. Mus. Jour., xi, 28-29.

—— 1911 B

The ground sloth group.

Amer. Mus. Jour., xi, 113-119, 4 figs.

Abstract in Rev. crit. Paléozool., xvii, 204.

—— 1911 C

A tree climbing ruminant.

Amer. Mus. Jour., xi, 162-163, 1 fig.

Abstract in Rev. crit. Paléozool., xvii, 200.

—— 1911 D

The amphibians of the great coal swamps.

Amer. Mus. Jour., xi, 197-200, 2 figs.

Abstract in Rev. crit. Paléozool., xviii, 7, 94.

—— 1911 E

Fossil vertebrates—what they teach.

Amer. Mus. Jour., xi, 246-247.

Matthew, W. D.—Continued 1912 A

Symposium on ten years progress in vertebrate paleontology. African mammals.

Bull. Geol. Soc. Amer., xxiii, 156-162.

For the other articles of this symposium see the 1912 papers of Peterson, Gidley, Gregory, True, Case, Holland, Lull, Hay, Merriam, Dean, Eastman, Osborn, Williston and Sinclair.

—— 1912 B

Symposium on ten years progress in vertebrate paleontology. Carnivora and Rodentia.

Bull. Geol. Soc. Amer., xxiii, 181-187.

—— 1912 C

The new four-toed horse skeleton.

Amer. Mus. Jour., xii, 186, 1 fig.

Name of the genus and species not given. A species of *Eohippus*.

—— 1912 D

New dinosaurs for the American Museum.

Amer. Mus. Jour., xii, 219.

—— 1912 E

Facts and theories relating to the ancestry of man.

Amer. Mus. Jour., xii, 255-256.

—— 1912 F

The ancestry of the edentates, as illustrated by the skeleton of *Hapalops*, a Tertiary ancestor of the ground sloths.

Amer. Mus. Jour., xii, 300-303, figs.

Reprinted with additions and further illustrations. Pages 1-8, with figs.

Abstracts in Sci. Progress, viii, 637; Rev. crit. Paléozool., xvii, 201; Nature, xcii, 106.

—— 1912 G

Fossil walrus skull from Penobscot Bay.

Amer. Mus. Jour., xii, 269.

An unsigned article.

—— 1913 A

A zalambdodont insectivore from the Basal Eocene.

Bull. Amer. Mus. Nat. Hist., xxxiii, 307-314, pls. lx, lxi, 6 text-figs.

Abstracts in Ann. N. Y. Acad., xxiii, 263; Neues Jahrb. Min. Geol. Pal., 1915, i, Ref., 140; Sci. Progress, viii, 629; Rev. crit. Paléozool., xvii, 199; xxi, 49; Geol. Zentralbl., xxi, 234; Nature, xcii, 106.

—— 1913 B

Certain theoretical considerations affecting phylogeny and correlation.

Bull. Geol. Soc. Amer., xxiv, 283-292, 1 text-fig.

Abstract in Geol. Centralbl., xx, 701-702; Rev. crit. Paléozool, xvii, 198-199.

Matthew, W. D.—Continued 1913 C

American Museum expeditions for fossil vertebrates.

Amer. Mus. Jour., XIII, 286-287.

——— 1913 D

The asphalt group of fossil skeletons. The tar-pits of Rancho-La-Brea, California.

Amer. Mus. Jour., XIII, 290-297, 6 plates.

Abstracts in Sci. Progress, VIII, 628; Nature, XCII, 457, 640.

——— 1913 E

The laws of nomenclature in paleontology.

Science (n.s.), XXXVII, 788-792.

——— 1913 F

Evolution of the horse.

Amer. Mus. Guide leaflet 36, 1-62, 38 figs.

The bibliography presents 29 titles.

——— 1913 G

A tiny fossil skull.

Amer. Mus. Jour., XIII, 48.

——— 1913 H

Nomenclature in paleontology.

Science (n.s.), XXXVIII, 87-88.

——— 1914 A

[Systematic position of the mylodont sloths.]

Bull. Geol. Soc. Amer., XXV, 144.

——— 1914 B

Evidence of the Paleocene vertebrate fauna on the Cretaceous-Tertiary problem.

Bull. Geol. Soc. Amer., XXV, 381-402, 3 text-figs.

Abstract in Rev. crit. Paléozool., XX, 38.

——— 1914 C

Report of progress in the revision of the Lower Eocene faunas.

Bull. Geol. Soc. Amer., XXV, 144-145.

——— 1914 D

New discoveries in the American Eocene.

Rep. Brit. Assoc. Adv. Sci., LXXXIII, Birmingham, 1913, 491.

——— 1914 E

Extinct vertebrates.

Rep. Amer. Mus. Nat. Hist., XLV, for 1913, 57-59.

A brief report of the activities of the department of vertebrate palæontology.

——— 1914 F

Origin of Argentine wild horses.

Nature, XCII, 661.

Matthew, W. D.—Continued 1914 G

Time ratios in the evolution of mammalian phyla. A contribution to the problem of the age of the earth.

Science (n.s.), XL, 232-235.

Abstract in Rev. crit. Paléozool., XXIV, 43.

——— 1914 H

Notes on auditory ossicles of rodents.

Bull. Amer. Mus. Nat. Hist., XXXIII, 350-351, 379-380.

——— 1914 I

Fossils from Rancho La Brea.

Amer. Mus. Jour., XIV, 46.

An unsigned article.

——— 1914 J

The largest known dinosaur. A huge extinct reptile from German East Africa, the largest known quadruped.

Scient. Amer., CXI, 443, 446-447, 1 fig.

——— 1914 K

Two new fossil mammals of the Lower Eocene.

Amer. Mus. Jour., XIV, 167.

An unsigned article.

——— 1914 L

Discovery of *Moropus* skeletons.

Amer. Mus. Jour., XIV, 269.

——— 1914 M

Note on *Felis atrox*.

Nature, XCII, 640.

——— 1915 A

Climate and evolution.

Ann. N. Y. Acad. Sci., XXIV, 171-318, 33 figs.

Review in Amer. Jour. Sci. (4), XL, 83-85.

——— 1915 B

Mammoths and mastodons.

Amer. Mus. Guide leaflet 43, 1-26, 1 plate, 16 text-figs.

Abstracts in Geol. Zentralbl., XXII, 538; Geol. Mag. (6), III, 128.

——— 1915 C

Dinosaurs; with special reference to the American Museum collections.

Amer. Mus. Nat. Hist., Handbook. No. 5, 1-117; 160-162, 1 plate, 40 text-figs.

Abstracts in Rev. crit. Paléozool., XX, 91; Geol. Zentralbl., XXII, 445; Nature, XCVI, 716, fig.

——— 1915 D

A revision of the Lower Eocene Wasatch and Wind River faunas. Part I: Order Feræ (Carnivora). Suborder Creodonta.

Bull. Amer. Mus. Nat. Hist., XXXIV, 1-103, 87 text-figs.

Abstract in Nature, XCV, 276.

Matthew, W. D.—Continued 1915 E

A revision of the Lower Eocene Wasatch and Wind River faunas. Part II: Order Condylarthra, family Hyopsodontidæ.

Bull. Amer. Mus. Nat. Hist., xxxiv, 311-328, 10 text-figs.

—— 1915 F

A revision of the Lower Eocene Wasatch and Wind River faunas. Part IV: Entelonychia, Primates, Insectivora (part).

Bull. Amer. Mus. Nat. Hist., xxxiv, 429-483, pl. xv, 52 text-figs.

Abstracts in Nature, xcvi, 236; Rev. crit. Paléozool., xix, 100; xx, 88.

—— 1915 G

New discoveries in the lower Eocene mammals.

Ann. N. Y. Acad. Sci., xxiv, 383.

—— 1915 H

A new sirenian from the Tertiary of Porto Rico.

Ann. N. Y. Acad. Sci., xxvi, 439.

—— 1915 I

Affinities of *Hyoposodus*.

Bull. Geol. Soc. Amer., xxvi, 152.

A brief abstract.

—— 1915 J

Reconstruction of the skeleton of *Brachiosaurus*.

Bull. Geol. Soc. Amer., xxvi, 153.

A brief abstract.

—— 1915 K

The Tertiary sedimentary record and its problems.

Dana Commem. Lectures. Problems of American Geology, 377-478, 2 pls., 40 figs.

—— 1915 L

Report on fossil vertebrates of eastern Texas.

Bull. Geol. Soc. Amer., xxvi, 470-472.

Incorporated in Dumble, E. T., 1915 A.

Same as Matthew, W. D., 1920 E.

—— 1916 A

A marsupial from the Belly River Cretaceous. With critical observations upon the affinities of the Cretaceous mammals.

Bull. Amer. Mus. Nat. Hist., xxxv, 477-500, pls. ii-vi, 4 text-figs.

Eodelphis browni is described.

Abstracts in Rev. crit. Paléozool., xxi, 54; Nature, xcviii, 175; Neues Jahrb. Min. Geol. Pal., 1918, Ref., 207-210.

Matthew, W. D.—Continued 1916 B

New sirenian from the Tertiary of Porto Rico, West Indies.

Ann. N. Y. Acad. Sci., xxvii, 23-29, 2 figs.

Abstracts in Ann. N. Y. Acad. Sci., xxvi, 439; Rev. crit. Paléozool., xxii, 1.

—— 1916 C

Methods of correlation by fossil vertebrates.

Bull. Geol. Soc. Amer., xxvii, 515-524.

Abstract in Rev. crit. Paléozool., xxiv, 44.

—— 1916 D

The grim wolf of the tar pits.

Amer. Mus. Jour., xvi, 45-47, 2 figs.

—— 1916 E

A reptilian aëronaut. A new skeleton of the giant flying reptile of the Cretaceous period.

Amer. Mus. Jour., xvi, 251-252, 1 fig.

—— 1916 F

Scourge of the Santa Monica mountains.

Amer. Mus. Jour., xvi, 469-472, 2 figs.

Refers to *Smilodon californicus*.

—— 1916 G

Kunz on *Ivory and the Elephant*.

Amer. Mus. Jour., xvi, 485-495, 13 figs.

A review.

—— 1916 H

Supplementary note. [On climate and evolution.]

Ann. N. Y. Acad. Sci., xxvii, 11-15.

Rejoinder to Barbour, T., 1916 A.

—— 1916 I

Recent progress in vertebrate palæontology. Mammals.

Science (n.s.), xliii, 107-110.

—— 1916 J

The horse and his progenitors.

Sci. Conspectus, vi, 1-14, 9 figs.

—— 1916 K

Dinosaurs from Alberta.

Amer. Mus. Jour., xvi, 74-75.

—— 1917 A

Absence of the pollex in Perissodactyla.

Bull. Amer. Mus. Nat. Hist., xxxvii, 573-577.

Abstracts in Rev. crit. Paléozool., xxii, 58; Geol. Zentralbl., xxvii, 223.

—— 1917 B

A Paleocene bat.

Bull. Amer. Mus. Nat. Hist., xxxvii, 569-571.

Gives a description of *Zanycteris paleocenus* gen. et sp. nov.

Abstracts in Geol. Mag. (6), iv, 516; Rev. crit. Paléozool., xxiv, 91; Geol. Zentralbl., xxvii, 223.

Matthew, W. D.—Continued 1917 C

The dentition of *Nothodectes*.

Bull. Amer. Mus. Nat. Hist., xxxvii, 831-839, pls. xcix-cii.

Abstracts in Rev. crit. Paléozool., xxv, 8; Geol. Zentralbl., xxvii, 222.

—— 1917 D

A fossil deer from Argentina. With a discussion of the distribution of various types of deer in North and South America.

Amer. Mus. Jour., xvii, 207-211, 2 illustrations.

—— 1917 E

Gigantic *Megatherium* from Florida.

Bull. Geol. Soc. Amer., xxviii, 212 (abstract).

—— 1917 F

Duck-billed dinosaurs. Census of fossil skeletons.

Amer. Mus. Jour., xvii, 419.

—— 1918 A

Contributions to the Snake Creek fauna; with notes upon the Pleistocene of western Nebraska; American Museum Expedition of 1916.

Bull. Amer. Mus. Nat. Hist., xxxviii, 183-229, pls. iv-x, 20 text-figs.

Abstract in Rev. Géol. et Sci. conn., iv, 1923, 101-103.

Reviews in Nat. Hist., xix, 732; Rev. crit. Paléozool., xxvii, 19.

—— 1918 B

A fortunate collector. The discoverer [William Stein] of the giant bird *Diatryma*, which was found in the Bighorn Basin of Wyoming.

Amer. Mus. Jour., xviii, 388, 3 illustrations.

—— 1918 C

Generic nomenclatures of the Proboscidea.

Bull. Geol. Soc. Amer., xxix, 141 (Abstract).

—— 1918 D

Affinities and phylogeny of the extinct Camelidæ.

Bull. Geol. Soc. Amer., xxix, 144 (abstract).

—— 1918 E

Notes on the American Pliocene rhinoceroses.

Bull. Geol. Soc. Amer., xxix, 153 (abstract).

Matthew, W. D.—Continued 1918 F

The mounted skeleton of *Moropus* in the American Museum.

A "clawed" ungulate, from the Middle Tertiary of Nebraska.

Amer. Mus. Jour., xviii, 121-123, 2 figs.

—— 1918 G

A Tertiary alligator.

Amer. Mus. Jour., xviii, 503-506, 1 fig.

—— 1918 H

A revision of the Lower Eocene Wasatch and Wind River faunas. Insectivora (continued), Glires, Edentata.

Bull. Amer. Mus. Nat. Hist., xxxviii, 565-657, 68 text-figs.

—— 1918 I

Affinities and origin of the Antillean mammals.

Bull. Geol. Soc. Amer., xxix, 657-666.

Abstract in Rev. Géol. et Sci. conn., iv, 1923, 100-101.

Review in Rev. crit. Paléozool., xxvii, 18.

—— 1918 J

Skeletons of Cuban ground sloth in the Havana and American museums.

Amer. Mus. Jour., xviii, 313, 2 figs.

Figures *Megalocnus*.

—— 1919 A

Reply to Mr. Burroughs.

Nat. Hist., xix, 491-493.

See Burroughs, J., 1919 A.

—— 1919 B

Recent discoveries of fossil vertebrates in the West Indies and their bearing on the origin of the Antillean fauna.

Proc. Amer. Philos. Soc., lviii, 161-181.

Abstracts in Rev. Géol. et Sci. conn., iv, 1923, 103-105; Geol. Zentralbl., xxvii, 120.

—— 1920 A

A new genus of rodents from the Middle Eocene.

Jour. Mamm., i, 168-169.

—— 1920 B

Flying reptiles.

Nat. Hist., xx, 73-81, 4 figs.

—— 1920 C

Three-toed horses. A fossil record that provides direct evidence of evolution.

Nat. Hist., xx, 473-478.

Matthew, W. D.—Continued 1920 D
Canadian dinosaurs.
Nat. Hist., xx, 536-544.
Issued in 1921.
Abstract in Rev. Géol. et Sci. conn., 1923, 105.
Review in Rev. crit. Paléozool., xxvii, 23.

—— 1920 E
[Report on east Texas vertebrates.]
Bull. Univ. Texas, No. 1869, 225; 231-233.

—— 1921 A
Stehlinius, a new Eocene insectivore.
Amer. Mus. Novit., No. 14, 1-5.
Abstract in Geol. Zentralbl., xxvii, 120.

—— 1921 B
Notes on the scientific museums of Europe.
Nat. Hist., xxi, 185-190.

—— 1921 C
The Cannonball Lance formation.
Science (n.s.), liv, 27-29.

—— 1921 D
Fossil vertebrates and the Cretaceous-Tertiary problem.
Amer. Jour. Sci. (5), ii, 209-227.
Abstract in Geol. Zentralbl., xxvii, 184.

—— 1921 E
Ursus and bison.
Nat. Hist., xxi, 598-606, illustrations.
Abstract in Rev. Géol. et Sci. conn., iv, 1923, 106.

—— 1921 F
Why palæontology?
Nat. Hist., xxi, 639-641, 1 figure.

—— 1921 G
Notes—Paleontology.
Nat. Hist., xxi, 658-662, 2 figures.

—— 1921 H
A note on the Cernaysian mammal fauna.
Amer. Jour. Sci. (5), i, 509-511.
Contains quotations from Teilhard de Chardin.

—— 1922 A
Errors and changes.
In Gregory, W. K., 1922 A, pages xiii-xiv.

—— 1922 B
Phyletic relations of Lance vertebrates.
Pan-Amer. Geol., xxxvii, 68-69.

—— 1922 C
A superdreadnaught of the animal world.
The armored dinosaur *Palæoscincus*.
Nat. Hist., xxii, 333-342, 6 figs.

Matthew, W. D.—Continued 1923 A
Geological occurrence of the *Hesperopithecus* tooth.
Amer. Mus. Novit., No. 53, 11-13.

—— 1923 B
Review of Zittel's *Grundzüge der Paläontologie*. II Abt. Vertebrata, Neuarbeitet von F. Broili und Max Schlosser, 1923.
Science (n.s.), lviii, 107-109.

—— 1923 C
Recent progress and trends in vertebrate paleontology.
Bull. Geol. Soc. Amer., xxxiv, 401-418.

—— 1923 D
Fossil bones on the rock. The fossil quarry near Agate, Sioux County, Nebraska.
Nat. Hist., xxiii, 358-369, 11 figs. Abstract in Nature, cxii, 522.

—— 1923 E
Stratigraphy of the Snake Creek fossil quarries and the correlation of the faunas (Abstract).
Bull. Geol. Soc. Amer., xxxiv, 131.

—— 1923 F
Fossil vertebrates.
Nat. Hist., xxiii, 520.

—— 1924 A
Note on *Serridentinus* Osborn.
Amer. Mus. Novit., cxlviii, 5.

—— 1924 B
Fossil horses from the Texas Pliocene.
Nat. Hist., xxiv, 629-631.

—— 1924 C
Third contribution to the Snake Creek fauna.
Bull. Amer. Mus. Nat. Hist., l, 59-210, 63 figs.
Abstract in Geol. Zentralbl., xxxii, 376.

—— 1924 D
A new link in the ancestry of the horse.
Amer. Mus. Novit. No. 131, 1-2.

—— 1924 E
Correlation of the Tertiary formations of the Great Plains.
Bull. Geol. Soc. Amer., xxxv, 743-754, 1 table.

—— 1924 F
Vertebrate palæontology. Welcomed home by a dinosaur. Fossil birds from Nebraska.
Nat. Hist., xxiv, 118-120, 1 fig.

Matthew, W. D.—Continued 1924 G
Fossil horses from the Texas Pliocene.
Nat. Hist., xxiv, 629-631.

—— 1924 H
Vertebrate fossils.
Nat. Hist., xxiv, 726-727.

—— 1925 A
Fossil mammals from St. Petersburg, Florida.
Nat. Hist., xxv, 97.

—— 1925 B
Blanco and associated formations of northern Texas.
Bull. Geol. Soc. Amer., xxxvi, 221-222.

—— 1925 C
The value of palæontology.
Nat. Hist., xxv, 166-168.

—— 1925 D
An American fossil giraffe, *Giraffa nebrascensis*, sp. nov.
Bull. Neb. State Mus., i, No. 4, 33-39, figs. 14-20.

—— 1925 E
A dissenting opinion.
Proc. Nat. Acad. Sci., xi, art. 12, 751.
In Osborn, H. F., 1925 C.

—— 1926 A
Note on rhinoceroses.
Bull. Dept. Geol. Univ. Calif., xvi, 50.
In Stock and Furlong, 1926 A.

—— 1926 B
On a new primitive deer and two traguloid genera from the Lower Miocene of Nebraska.
Amer. Mus. Novit., No. 215, 1-8, 3 figs.

—— 1926 C
The evolution of the horse. A record and its interpretation.
Quart. Rev. Biol., i, 139-185, 27 figs.
The extensive bibliography is found on pages 178-185.

—— 1926 D
Early days of fossil hunting in the high Plains.
Nat. Hist., xxvi, 449-454, 5 figs.

—— 1928 A
Xenotherium, an edentate.
Jour. Mamm., ix, 70, 71.

——, and B. **Brown** 1915 A
Corythosaurus, the new duck-billed dinosaur.
Amer. Mus. Jour., xv, 427-428.

Matthew, W. D., and B. **Brown**—Continued 1922 A
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Science (n.s.), xv, 411-412 (abstract).

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—— 1903 C

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Science (n.s.), XVII, 297.

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Science (n.s.), XVIII, 311-312.

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Science (n.s.), XIX, 218.

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Bull. Dept. Geol., Univ., Calif., IV, 171-174, 1 fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 133; Rev. crit. Paléozool., X, 15.

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Amer. Jour. Sci. (4), XX, 403-404.

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Bull. Dept. Geol. Univ. Calif., V, 1-64, pls. i-vi.

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—— 1906 B

Preliminary note on a new marine reptile from the Middle Triassic of Nevada.

Bull. Dept. Geol. Univ. Calif., V, 75-79, pls. viii-ix.

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Science (n.s.), XXIV, 151-152.

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Recent discoveries of Quaternary mammals in southern California.

Science (n.s.), XXIV, 248-250.

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Amer. Anthrop. (2), VIII, 221-228.

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Science (n.s.), xxvi, 380-382.

—— 1908 A

Notes on the osteology of the thalattosaurian genus *Nectosaurus*.

Bull. Dept. Geol. Univ. Calif., v, 217-223, pls. xvii-xviii.

Brief abstracts in Geol. Centralbl., xii, 222; Rev. crit. Paléozool., xiii, 12.

—— 1908 B

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—— 1908 C

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—— 1908 D

Death-trap of the ages.

Sunset Mag., xxi, 467-475, 10 illustrations.

A popular account of the tar pools at Rancho La Brea, Calif.

Abstract in Geol. Mag. (5), vi, 228.

—— 1909 A

The skull and dentition of an extinct cat closely allied to *Felis atrox* Leidy.

Bull. Dept. Geol. Univ. Calif., v, 291-304, pl. xxvi, 3 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, i, Ref., 134; Geol. Centralbl., xiv, 488; Rev. crit. Paléozool., xiv, 12; Amer. Jour. Sci. (4), xxviii, 501; Sci. Progress, iv, 653.

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The occurrence of strepsicerine antelopes in the Tertiary of northwestern Nevada.

Bull. Dept. Geol. Univ. Calif., v, 319-330, text-figs. 1-7.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, i, 311; Geol. Centralbl., xiv, 489; Rev. crit. Paléozool., xiv, 169; Amer. Jour. Sci. (4), xxix, 271; Sci. Progress, iv, 660.

—— 1909 C

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Harper's Weekly liii, Dec. 18, 11-12, 9 figs.

Merriam, John C.—Continued 1909 D

Note on the occurrence of human remains in Californian caves.

Science (n.s.), xxx, 531-532.

—— 1910 A

New Mammalia from Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., v, 391-395.

Abstract in Geol. Centralbl., xv, 62.

—— 1910 B

The skull and dentition of a primitive ichthyosaurian from the Middle Triassic.

Bull. Dept. Geol. Univ. Calif., v, 381-390, pl. xl.

Describes *Phalarodon fraasi* new genus and species.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, i, Ref., 462; Geol. Centralbl., xv, 218; Rev. crit. Palézool., xiv, 82; Sci. Progress, vi, 575.

—— 1910 C

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Bull. Dept. Geol. Univ. Calif., vi, 21-53, pls. i-xii.

Review in Rev. crit. Paléozool., xvi, 80.

Abstract in Geol. Centralbl., xix, 384.

—— 1910 D

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Pop. Sci. Month., lxxvii, 597-601.

—— 1910 E

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Sunset Mag., xxiv, 153-158, 7 illustrations.

—— 1911 A

Note on a gigantic bear from the Pleistocene of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., vi, 163-166, figs. 1-3.

Describes new species *Arctotherium californicum*.

—— 1911 B

Tertiary mammal beds of Virgin Valley and Thousand Creek in northwestern Nevada. Pt. II: Vertebrate faunas.

Bull. Dept. Geol. Univ. Calif., vi, 199-304, pls. xxxii, xxxiii, 80 text-figs.

Abstract in Sci Progress, vi, 558.

Merriam, John C.—Continued 1911 C

Notes on the relationships of the marine saurian fauna described from the Triassic of Spitzbergen by Wiman.

Bull. Dept. Geol. Univ. Calif., VI, 317-327, 6 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, 476; Sci. Progress, VI, 574.

Review in Rev. crit. Paléozool., XVI, 150.

—— 1911 D

Notes on the genus *Desmostylus* of Marsh.

Bull. Dept. Geol. Univ. Calif., VI, 403-412, 11 text-figs.

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Review in Rev. crit. Paléozool., XVI, 78.

—— 1911 E

A collection of mammalian remains from Tertiary beds on the Mohave Desert.

Bull. Dept. Geol. Univ. Calif., VI, 167-169, pl. XXIX.

Abstract in Geol. Centralbl., XVII, 37.

—— 1911 F

The fauna of Rancho La Brea. Pt. I: Occurrence.

Mem. Univ. Calif., I, 197-213, pls. XIX-XXIII, 1 text-fig.

Review in Rev. crit. Paléozool., XVI, 83.

—— 1912 A

Recent discoveries of Carnivora in the Pleistocene of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., VII, 39-46, 10 text-figs.

Abstracts in Geol. Centralbl., XIX, 442; Sci. Progress, VIII, 5.

—— 1912 B

Symposium on ten years progress in vertebrate paleontology. Marine reptiles.

Bull. Geol. Soc. Amer., XXIII, 221-223.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Lull, Hay, Dean, Eastman, Osborn, Williston and Sinclair.

—— 1912 C

The fauna of Rancho La Brea. Pt. II: Canidæ.

Mem. Univ. Calif., I, 215-272, pls. XXIV-XXVIII, 43 text-figs.

Abstracts in Geol. Centralbl., XIX, 400; Sci. Progress, VIII, 5; Rev. crit. Paléozool., XVII, 4.

Merriam, John C.—Continued 1913 A

Tapir remains from late Cenozoic beds of the Pacific Coast region.

Bull. Dept. Geol. Univ. Calif., VII, 169-175, 2 text-figs.

Abstracts in Geol. Centralbl., XX, 703; Nature, XCII, 514.

—— 1913 B

The skull and dentition of a camel from the Pleistocene of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., VII, 305-323, text-figs. 1-11.

Abstracts in Geol. Centralbl., XX, 703; Rev. crit. Paléozool., XVII, 202.

—— 1913 C

A peculiar horn or antler from the Mohave Miocene of California.

Bull. Dept. Geol. Univ. Calif., VII, 335-339, 4 text-figs.

Abstract in Rev. crit. Paléozool., XX, 43.

—— 1913 D

Notes on the canid genus *Tephrocyon*.

Bull. Dept. Geol. Univ. Calif., VII, 359-372, 16 text-figs.

Abstracts in Geol. Centralbl., XX, 703; Sci. Progress, VIII, 630; Rev. crit. Paléozool., XX, 41.

—— 1913 E

Vertebrate fauna of the Orindan and Siestan beds in middle California.

Bull. Dept. Geol. Univ. Calif., VII, 373-385, 9 text-figs.

Abstracts in Rev. crit. Paléozool., XX, 42; Geol. Zentralbl., XXI, 38.

—— 1913 F

Preliminary report on the horses of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., VII, 397-418, 14 text-figs.

Abstracts in Rev. crit. Paléozool., XIX, 10; L'Anthrop. Paris, XXVI, 1915, 567; Geol. Zentralbl., XXI, 233.

—— 1913 G

New anchitheriine horses from the Tertiary of the Great Basin area.

Bull. Dept. Geol. Univ. Calif., VII, 419-434, 5 text-figs.

Abstracts in Rev. crit. Paléozool., XIX, 8; Geol. Zentralbl., XXI, 233.

—— 1913 H

New protohippine horses from Tertiary beds on the western border of the Mohave Desert.

Bull. Dept. Geol. Univ. Calif., VII, 435-441, 4 text-figs.

Abstracts in Rev. crit. Paléozool., XIX, 9; Geol. Zentralbl., XXI, 234.

Merriam, John C.—Continued 1914 A

The occurrence of Tertiary mammalian remains in northeastern Nevada.

Bull. Dept. Geol. Univ. Calif., VIII, 275-281, 3 text-figs.

Abstracts in Rev. crit. Paléozool., XX, 42; Geol. Zentralbl., XXIX, 472.

—— 1914 B

Preliminary report on the discovery of human remains in an asphalt deposit at Rancho La Brea.

Science (n.s.), XL, 198-203.

—— 1914 C

Correlation between the Tertiary of the Great Basin and that of the marginal marine province in California.

Science (n.s.), XL, 643-645.

—— 1914 D

Vertebrate fossils found in region about San Francisco, California.

Folio U. S. Geol. Surv., San Francisco, CXCIII, 13-15.

—— 1914 E

Review of Holland and Peterson's *Osteology of the Chalicotheroidea.*

Jour. Geol., XXII, 818.

—— 1914 F

The Brea maid.

Bull. So. Calif. Acad. Sci., XIII, 27-29.

—— 1914 G

Vertebrate fauna of the Orindan and Siestan formations.

Bull. Geol. Soc. Amer., XXV, 156 (Abstract).

—— 1915 A

New species of the *Hipparion* group from the Pacific Coast and Great Basin provinces of North America.

Bull. Dept. Geol. Univ. Calif., IX, 1-8, 5 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 86; Geol. Zentralbl., XXIX, 473.

—— 1915 B

Remains of land mammals from marine Tertiary beds in the Tejon Hills, California.

Bull. Dept. Geol. Univ. Calif., VIII, 283-288, 7 text-figs.

Abstract in Rev. crit. Paléozool., XX, 42.

—— 1915 C

An occurrence of mammalian remains in a Pleistocene lake deposit at Astor Pass, near Pyramid Lake, Nevada.

Bull. Dept. Geol. Univ. Calif., VIII, 377-382, pl. xli, 3 text-figs.

Abstracts in Rev. crit. Paléozool., XX, 42; Geol. Zentralbl., XXIX, 443.

Merriam, John C.—Continued 1915 D

New horses from the Miocene and Pliocene of California.

Bull. Dept. Geol. Univ. Calif., IX, 49-58, 12 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 86; Geol. Zentralbl., XXIX, 473.

—— 1915 E

Tertiary vertebrate faunas of the North Coalinga region of California. A contribution to the study of palæontologic correlation in the Great Basin and Pacific Coast provinces.

Trans. Amer. Philos. Soc. (2), XXII, 191-234, 49 text-figs.

Issued also as a reprint of pages 1-44.

—— 1915 F

Extinct faunas of the Mohave desert, their significance in a study of the origin and evolution of life in America.

Pop. Sci. Month., LXXXVI, 245-264, 11 text-figs.

—— 1915 G

Significant features in the history of life on the Pacific coast.

Nature and science on the Pacific coast, San Francisco, 8vo., i-xii+1-302 pages, with maps, plates, and text-figs. The article cited occupies pages 88-103.

—— 1915 H

Relation of the Tertiary geological scale of the Great Basin to that of the Pacific coast marginal province.

Bull. Geol. Soc. Amer., XXVI, 136-137.

A brief abstract.

—— 1916 A

Tertiary vertebrate fauna from the Cedar Mountain region of western Nevada.

Bull. Dept. Geol. Univ. Calif., IX, 161-198, pl. viii, 48 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 90; Geol. Mag. (6), III, 284.

—— 1916 B

Relationship of *Equus* to *Pliohippus* suggested by characters of a new species from the Pliocene of California.

Bull. Dept. Geol. Univ. Calif., IX, 525-534, 18 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 86; Geol. Mag. (6), III, 283.

Merriam, John C.—Continued 1916 C

Mammalian remains from the Chanac formation of the Tejon Hills, California.

Bull. Dept. Geol. Univ. Calif., x, 111-127, 21 text-figs.

Abstract in Rev. crit. Paléozool., xxi, 86.

—— 1916 D

Mammalian remains from a late Tertiary formation at Ironside, Oregon.

Bull. Dept. Geol. Univ. Calif., x, 129-135, 3 text-figs.

—— 1916 E

Remarks made on papers presented before Palæontological Society.

Bull. Geol. Soc. Amer., xxvii, 169, 170, 172.

—— 1916 F

Hipparion-like horses of the Pacific coast and Great Basin provinces (abstract).

Bull. Geol. Soc. Amer., xxvii, 171.

—— 1916 G

Note on a tooth of *Merychippus* from Florida.

Rep. Florida Geol. Surv., viii, 88.

—— 1917 A

Relationships of Pliocene mammalian faunas from the Pacific coast and Great Basin provinces of North America.

Bull. Dept. Geol. Univ. Calif., x, 421-443, 1 text-fig.

—— 1917 B

Felidæ of Rancho La Brea.

Bull. Geol. Soc. Amer., xxviii, 211 (Abstract).

—— 1918 A

New Mammalia from the Idaho formation.

Bull. Dept. Geol. Univ. Calif., x, 523-530, 5 text-figs.

Abstract in Bull. Geol. Soc. Amer., xxix, 162.

—— 1918 B

Note on the systematic position of the wolves of the *Canis dirus* group.

Bull. Dept. Geol. Univ. Calif., x, 531-533.

Abstract in Geol. Zentralbl., xxix, 473.

—— 1918 C

New puma-like cat from Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., x, 535-537, 2 text-figs.

Abstract in Geol. Zentralbl., xxix, 473.

Merriam, John C.—Continued 1918 D

Evidence of mammalian palæontology relating to the age of Lake Lahontan.

Bull. Dept. Geol. Univ. Calif., x, 517-521.

—— 1919 A

Tertiary mammalian faunas of the Mohave desert.

Bull. Dept. Geol. Univ. Calif., xi, 437a-437e; 438-585, 253 text-figs.

Abstracts in Rev. Géol. et Sci. conn., iv, 1923, 107-108; Geol. Zentralbl., xxx, 20-22.

Reviews in Amer. Jour. Sci. (4), xlviii, 399; Rev. crit. Paléozool., xxvii, 25.

—— 1921 A

An outline of progress in palæontological research on the Pacific coast.

Bull. Dept. Geol. Univ. Calif., xii, 237-266.

The list of publications cited occupies pages 254-266.

—— 1921 B

Origin and history of the bear family in the western hemisphere, with particular reference to the relation of this question to problems of geographical history.

Proc. Nat. Acad. Sci., vii, 183-185.

—— 1922 A

Report of John C. Merriam and associates on palæontological researches.

Publ. Carnegie Instn. Wash. Year Book No. 20, for 1921, 447-451.

—— 1923 A

Continuation of palæontological researches.

Publ. Carnegie Instn. Wash. Year Book No. 21, 398-400.

—— 1924 A

Continuation of palæontological researches.

Publ. Carnegie Instn. Wash. Year Book No. 22, 351-353.

—— 1924 B

Present status of investigation concerning antiquity of man in California.

Science (n.s.), lx, 1-2.

Abstract in Science (n.s.), cxiv, 204.

—— 1927 A

The cave of the magic pool.

Scribner's Mag., lxxxii, Sept., 264-272, 7 illustrations.

Merriam, John C., and Harold C. **Bryant** 1911 A

Notes on the dentition of *Omphalosaurus.*

Bull. Dept. Geol. Univ. Calif., VI, 329-332, 2 text-figs.

See Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 476, for brief notice.

Abstract in Sci. Progress, VI, 575.

Review in Rev. crit. Paléozool., XVI, 151.

——, and J. P. **Buwalda** 1917 A

Age of strata referred to the Ellensburg formation in the White Bluffs of the Columbia River.

Bull. Dept. Geol. Univ. Calif., X, 255-266, pl. xiii.

——, and C. L. **Camp** 1916 A

Recent studies on skull structure of *Thalattosaurus.*

Bull. Geol. Soc. Amer., XXVII, 171 (Abstract).

——, and Robert W. **Pack** 1913 A

Suggested paleontological correlation between continental Miocene deposits of the Mohave region and marine Tertiary beds of San Joaquin Valley, California.

Bull. Geol. Soc. Amer., XXIV, 128 (Abstract).

——, and W. J. **Sinclair** 1903 A

The correlation of the John Day and the Mascall.

Jour. Geol., XI, 95-96.

Brief notice in Geol. Centralbl., IX, 653.

—— —— 1907 A

Tertiary faunas of the John Day region.

Bull. Dept. Geol. Univ. Calif., V, 171-205.

Abstracts in Geol. Centralbl., XI, 419; Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 128-130.

——, and Chester **Stock** 1921 A

Occurrence of Pleistocene vertebrates in an asphalt deposit near McKittrick, California.

Science (n.s.), LIV, 566-567.

—— —— 1921 B

Notes on the peccary remains from Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., XIII, 9-17, figs. 1-8.

Abstract in Geol. Zentralbl., XXIX, 446.

—— —— 1925 A

Relationships and structure of the short-faced bear, *Arctotherium,* from the Pleistocene.

Publ. Carnegie Instn. Wash., No. 347, art. 1, 1-35, pls. i-x, 6 text-figs.

The bibliography presents 40 titles.

Merriam, John C., and Chester **Stock**—Continued 1925 B

A llama from the Pleistocene of McKittrick, California.

Publ. Carnegie Instn. Wash., No. 347, 38-44, 4 figs.

—— —— 1927 A

A hyænarctid bear from the later Tertiary of the John Day basin of Oregon.

Publ. Carnegie Instn. Wash., No. 346, 39-44, 1 pl.

—— —— and C. L. **Moody** 1916 A

An American Pliocene bear.

Bull. Dept. Geol. Univ. Calif., X, 87-109, 23 figs.

Abstracts in Rev. crit. Paléozool., XXI, 87; Geol. Zentralbl., XXIX, 446.

—— —— —— 1925 A

The Pliocene Rattlesnake formation and fauna of eastern Oregon, with notes on the geology of the Rattlesnake and Mascall deposits.

Publ. Carnegie Instn. Wash., No. 347, 43-92, figs. 1-45.

Merrill, George P. 1907 A

Catalogue of the types, cotypes, and figured specimens of fossil vertebrates in the department of geology, U. S. National Museum.

Bull. U. S. Nat. Mus., LIII, pt. 2, i-v+ 1-81.

Metcalf, Maynard M. 1904 A

Seals and sea-lions ingesting pebbles.

Science (n.s.), XX, 722.

—— 1923 A

The origin and distribution of the Anura.

Amer. Naturalist, LVII, 385-411, 15 distribution maps.

19 titles are listed in the bibliography.

Mettam, A. E. 1894 A

The os pedis in ungulates.

Nature, XLIX, 341.

Meunier, Stanislas 1903 A

Le rôle des êtres vivants dans la physiologie générale de la terre.

Rev. Scient. Paris (4), XX, 769-779.

Meyer, Georg Herrmann 1847 A

Ueber den Bau der Haut von *Dasypus* und der Stacheln von *Raja.*

Mitt. naturf. Ges. Zurich, I, 87-92, 1 fig.

Meyer, Hermann v. 1840 B

[On proboscideans in Mexico.]

Neues Jahrb. Min. Geogn. Geol., 1840, 581.

Meyer, Hermann v.—Continued 1842 A
Labyrinthodonten-Genera.
Neues Jahrb. Min. Geogn. Geol., 1842, 301-304.

—— 1845 C
System der fossilen Saurier.
Neues Jahrb. Min. Geogn. Geol., 1845, 278-285.

—— 1847 B
On the *Pterodactylus* (*Rhamphorhynchus*) *gemmingi* from the Calcareous slates of Solenhofen.
Quart. Jour. Geol. Soc., III, part 2, 72-74.

—— 1860 E
Salamandrinen aus der Braunkohle am Rhein und in Böhmen.
Palaeontogr., VII, 47-73, pls. viii, ix.

—— 1860 F
Frösche aus Tertiär-Gebilden Deutschlands.
Palaeontogr., VII, 123-182, pls. xvi-xxii.

—— 1865 A
Der Schädel von *Glyptodon.*
Palaeontogr., XIV, 1-18, pls. i-vii.
Abstract in Zeitschr. gesammt. Naturw., XXV, 461.

—— 1867 C
Über Mastodon.
Neues Jahrb. Min. Geol. Pal., 1867, 785-794.

Meyers, —— 1868 A
[Finding of bones of a mastodon in Noble County, Indiana.]
Amer. Naturalist, II, 56.

Miall, L. C. 1872 A
On the structure of the ganoid fishes.
Proc. Yorksh. Geol. Polyt. Soc. (n.s.), VI, 24-45.

—— 1874 C
On the remains of Labyrinthodonta from the Keuper Sandstone of Warwick preserved in the Warwick Museum.
Quart. Jour. Geol. Soc., XXX, 417-435, pls. xxvi-xxviii.

—— 1875 D
Ctenodus cristatus.
Ann. Mag. Nat. Hist. (4), XV, 436.

Michahelles, —— 1833 A
Zur Geschichte der *Alca impennis.*
Isis von Oken, 1833, 648-651.

Michelsson, Gustav 1922 A
Das Chondrocranium des Igels (*Erinaceus europæus*).
Zeitschr. Anat. Entwicklungsges., Abt. I, LXV, 508-543, 4 figs.
The bibliography presents 26 titles.

Middendorff, Alexander Theodor 1867 A
Reise in den äussersten Norden und Osten Sibiriens.
St. Petersburg, 8vo., IV, pt. 1, i-xiii+1-783+i-lviii.
Pages 271-294 are devoted to a discussion of the mammoth of Siberia.

Middleton, J. 1844 A
Comparative analysis of recent and fossil bones.
Edinb. New Philos. Jour., XXXVII, 285-288.
Reprinted from Philos. Magazine, No. 164, page 14.

Miklouho-Maclay, N. 1879 A
Anatomical remarks on the dentition of the Heterondonti and on the external organs of the male *Heterodontus phillipi.*
Proc. Linn. Soc. N. S. Wales, III, 320-334, pls. xxii-xxvi.

——, and W. **Macleay** 1879 A
Plagiostmata of the Pacific.
Proc. Linn. Soc. N. S. Wales, III, 306-317; pls. xxii-xxvi.

Miller, A. M. 1916 A
Some historic fish remains [from Vanceburg, Ky.].
Science (n.s.), XLIV, 71-72.

Miller, Benjamin Leroy 1911 A
Report on the physical features of Prince George's County.
Maryland Geol. Surv., Prince Georges Co., 24-150, pls. i-xiii, 3 figs.
A bibliography occupies pages 33-68.

—— 1912 A
Description of the Choptank [Maryland] quadrangle.
Folio U. S. Geol. Surv., CLXXXII, 1-8, 2 maps, 3 text-figs.

——. See **Shattuck, Miller,** and **Bibbins.**

——, and L. W. **Stephenson** 1912 A
Bibliography [of the Coastal Plain of North Carolina].
N. Carolina Geol. Econ. Surv., III, 44-73.

Miller, Gerrit S. 1895 A
The long-tailed shrews of the eastern United States.
N. A. Fauna, No. x, 34-56, pls. iv-vi.

—— 1902 A
The technical name of the Virginia deer.
Proc. Biol. Soc. Wash., XV, 39.

—— 1907 A
The families and genera of bats.
Bull. U. S. Nat. Mus., LVII, i-xvii+1-282 pages, pls. i-xv, 49 text-figs.

Miller, Gerrit S.—Continued 1912 A

Catalogue of the mammals of western Europe (Europe exclusive of Russia) in the collection of the British Museum.

London: Printed by order of the trustees of the British Museum, i-xv+1-1019 pages, 213 text-figs.

—— 1912 B

List of North American land mammals in the United States National Museum.

Bull. U. S. Nat. Mus., LXXIX, i-xv+1-455 pages.

Reviewed in Science (n.s.), XVIII, 453-454.

—— 1912 C

The names of the large wolves of northern and western North America.

Smithson. Misc. Coll., LIX, No. 15, 1-5.

—— 1912 D

The names of two North American wolves.

Proc. Biol. Soc. Wash., XXV, 95.

—— 1920 A

Conflicting views on the problem of man's ancestry.

Amer. Jour. Phys. Anthrop., III, 213-245, 3 figs.

—— 1920 B

Review of Joleaud, L. (1919 A) on migrations of mammals.

Jour. Mamm., I, 190-192.

—— 1923 A

The telescoping of the cetacean skull.

Smithson. Misc. Coll., LXXVI, art. 5, 1-70, 8 pls.

—— 1923 B

Remarks on *Hesperopithecus.*

Bull. Amer. Mus. Nat. Hist., XLVIII, 510, 513-514, 517, 520, 527.

—— 1924 A

A second instance of the development of rodent-like incisors in an artiodactyl.

Proc. U. S. Nat. Mus., LXVI, art. 8, 1-4.

—— 1924 B

A pollack whale from Florida, presented to the National Museum by the Miami Aquarium Association.

Proc. U. S. Nat. Mus., LXVI, art. 9, 1-15, pls. i-xxii.

—— 1924 C

List of North American recent mammals.

Government Printing Office, Washington, 8vo., i-xvi+1-673 pages.

Miller, Gerrit S.—Continued 1927 A

Revised determinations of some Tertiary mammals from Mongolia.

Palaeont. Sinica, V, fasc. 2, 5-20.

——, and J. W. **Gidley** 1918 A

Synopsis of the supergeneric groups of rodents.

Jour. Wash. Acad. Sci., VIII, 431-448.

—— —— 1920 A

A new fossil rodent from the Oligocene of South Dakota.

Jour. Mamm., I, 73-74.

Miller, Hugh 1851 A

On certain extraordinary peculiarities of structure in the more ancient ganoids.

Rep. Brit. Assoc. Adv. Sci., XX, 1850 (1851), 91-93.

—— 1857 A

The testimony of the rocks: or geology in its bearings on the two theologies, natural and revealed.

Boston, 8vo., i-xiv+5-502 pages, 152 figs.

Miller, John 1869 A

The so-called hyoid plate of *Asterolepis.*

Geol. Mag., VI, 384.

Miller, Loye Holmes 1909 A

Pavo californicus, a fossil peacock from the Quaternary asphalt-beds of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., V, 285-289, pl. XXV.

Abstracts in Rev. crit. Paléozool., XIV, 13; Sci. Progress, IV, 666.

—— 1909 B

Teratornis, a new avian genus from Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., V, 305-317, 11 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 314; Geol. Centralbl., XIV, 340; Rev. crit. Paléozool., XIV, 12; Amer. Jour. Sci. (4), XXVIII, 501-502; Sci. Progress, IV, 667.

—— 1910 A

Wading birds from the Quaternary asphalt beds of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., V, 439-448, 8 text-figs.

Abstracts in Geol. Centralbl., XV, 651; Sci. Progress, V, 675; Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 314; Rev. crit. Paléozool., XV, 146.

Miller, Loye Holmes—Cont'd 1910 B

The condor-like vultures of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., VI, 1-19, text-figs. 1-5.

Abstracts in Geol. Centralbl., XVII, 40; Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 313; Rev. crit. Palézool., XV, 146.

—— 1910 C

Fossil birds from the Quaternary of southern California.

Condor, XII, 12-15.

—— 1911 A

Additions to the avifauna of the Pleistocene deposits at Fossil Lake, Oregon.

Bull. Dept. Geol. Univ. Calif., VI, 79-87, 3 text-figs.

Brief abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 475; Geol. Centralbl., XVII, 335; Rev. crit. Paléozool., XV, 146.

—— 1911 B

A series of eagle tarsi from the Pleistocene of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., VI, 305-316, 5 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 475; Geol. Centralbl., XVIII, 670; Sci. Progress, VI, 565.

Review in Rev. crit. Paléozool., XVI, 86.

—— 1911 C

Avifauna of the Pleistocene cave deposits of California.

Bull. Dept. Geol. Univ. Calif., VI, 385-400, 5 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 475; Geol. Centralbl., XVIII, 669.

—— 1911 D

A synopsis of our knowledge concerning the fossil birds of the Pacific Coast of North America.

Condor, XIII, 117-118.

—— 1912 A

Contributions to avian palæontology from the Pacific Coast of North America.

Bull. Dept. Geol. Univ. Calif., VII, 61-115.

—— 1913 A

Contributions to avian palæontology from the Pacific coast of North America.

Bull. Geol. Soc. Amer., XXIV, 132 (Abstract).

Miller, Loye Holmes—Cont'd 1914 A

Bird remains from the Pleistocene of San Pedro, California.

Bull. Dept. Geol. Univ. Calif., VIII, 31-38.

Abstracts in Rev. crit. Paléozool., XIX, 11; Geol. Zentralbl., XXI, 621; XXIX, 476.

—— 1915 A

A walking eagle from Rancho La Brea.

Condor, XVII, 179-181, 1 fig.

Describes *Morphnus daggetti.*

—— 1915 B

The fauna of California.

Z. S. Eldredge's *History of California,* vol. V, 51-76.

—— 1916 A

A review of the species *Pavo californicus.*

Bull. Dept. Geol. Univ. Calif., IX, 89-96, 2 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 55; Geol. Zentralbl., XXIX, 476; Geol. Mag. (6), III, 283.

—— 1916 B

The owl remains from Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., IX, 97-104, 1 text-fig.

Abstracts in Rev. crit. Paléozool., XXI, 88; Geol. Zentralbl., XXIX, 476.

—— 1916 C

Two vulturid raptors from the Pleistocene of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., IX, 105-109, 2 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 56; Geol. Zentralbl., XXIX, 476. In Aquila, XXIII, 382-385, 583-586; nine of Miller's papers are noted and lists of his species are given.

—— 1916 D

Bird remains collected in the Cedar Mountain region of western Nevada.

Bull. Dept. Geol. Univ. Calif., IX, 173.

—— 1916 E

Review of the Pleistocene species *Pavo californicus.* (Abstract.)

Bull. Geol. Soc. Amer., XXVII, 171.

—— 1919 A

The walking eagle of California.

Overland Monthly (2), LXXII, 427-429.

—— 1921 A

Bird remains from asphalt deposit at McKittrick, California.

Science (n.s.), LIV, 567.

—— 1921 B

Asphalt beds of Rancho La Brea.

Jour. Wash. Acad. Sci., XI, 262-263.

Miller, Loye Holmes—Cont'd 1921 C
Synopsis of California's fossil birds.
Condor, XXIII, 129-130.

—— 1922 A
Fossil birds from the Pleistocene of McKittrick.
Condor, XXIV, 122-125.
Abstract in Geol. Zentralbl., XXXIII, 92.

—— 1923 A
California's ancient bird life.
Univ. Calif. Chronicle, July 1923, 345-355.

—— 1924 A
Anomalies in the distribution of fossil gulls.
Condor, XXVI, 173-174.

—— 1924 B
Branta dickeyi from the McKittrick Pleistocene.
Condor, XXVI, 178-180, 4 figs.

—— 1925 A
Avifauna of the McKittrick Pleistocene.
Bull. Dept. Geol. Univ. Calif., XV, 307-326, 2 figs.

—— 1925 B
The birds of Rancho La Brea.
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Anat. Anz., XXXIV, 361-364.

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Amer. Naturalist, XLIV, 367-375, 4 text-figs.

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——— 1910 B

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Science (n.s.), XXXII, 721.

Moodie, R. L.—Continued 1910 C

The Amphibia of the Mazon Creek shales.

Science (n.s.), XXXI, 233-234.

——— 1911 A

A new labyrinthodont from the Kansas Coal Measures.

Proc. U. S. Nat. Mus., XXXIX, 489-495, 4 text-figs.

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Abstracts in Geol. Centralbl., XVII, 42; Sci. Progress, VI, 580.

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Recent contributions to a knowledge of the extinct Amphibia.

Amer. Naturalist, XLV, 375-384.

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An embryonic plesiosaurian propodial.

Trans. Kansas Acad. Sci., XXIII, 95-101, pl. i, 9 text-figs.

——— 1911 E

The temnospondylous Amphibia, and a new species of *Eryops* from the Permian of Oklahoma.

Kansas Univ. Sci. Bull., V, 235-253, pls. xlix-liv.

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An armored dinosaur from the Cretaceous of Wyoming.

Kansas Univ. Sci. Bull., V, 257-273, pls. lv-lix, 1 text-fig.

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——— 1911 G

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Kansas Univ. Sci. Bull., V, 277-287, pls. lx-lxii.

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—— 1912 A

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Amer. Jour. Sci. (4), xxxiv, 277-285, 4 text-figs.
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—— 1912 B

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Amer. Jour. Sci. (4), xxxiv, 286-288.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, i, Ref., 527; Geol. Centralbl., xix, 567; Sci. Progress, viii, 19; Rev. crit. Paléozool., xvii, 78; Nature, xc, 139, 599.

—— 1912 C

The "stomach stones" of reptiles.

Science (n.s), xxxv, 377-378.

—— 1912 D

The Pennsylvanic Amphibia of the Mazon Creek, Illinois, shales.

Kansas Univ. Sci. Bull., vi, 323-359, pls. i-xiv.
Abstract in Geol. Zentralbl., xxi, 39.

—— 1912 E

The skull structure of *Diplocaulus magnicornis* Cope and the amphibian order Diplocaulia.

Jour. Morphol., xxiii, 31-39, pls. i, ii.
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Abstract in Neues Jahrb. Min. Geol. Pal., 1912, ii, Ref., 150-151.

—— 1913 A

Some recent advances in vertebrate palæontology.

Amer. Naturalist, xlvii, 183-192, 248-256.

—— 1913 B

Vertebrate footprints in the Lower Permian of Kansas.

Amer. Jour. Sci. (4), xxxv, 31-33, 1 fig.
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No name is given to these footprints.

—— 1914 A

A list of the described species of fossil Amphibia.

Kansas Univ. Sci. Bull., ix, 13-28.

—— 1914 B

The fossil frogs of North America.

Amer. Jour. Sci. (4), xxxviii, 531-536, 2 text-figs.

Moodie, R. L.—Continued 1915 A

A Coal Measures amphibian with an osseous tarsus.

Amer. Jour. Sci. (4), xxxix, 509-512, 2 text-figs.
Abstracts in Rev. crit. Paléozool., xxiv, 87; Geol. Zentralbl., xxv, 468.

—— 1915 B

Some methods of studying fossil Amphibia embedded in coal.

Kansas Univ. Sci. Bull., ix, 187-193, pl. L, 3 text-figs.

—— 1915 C

A remarkable microsaur from the Coal Measures of Ohio.

Science (n.s.), xli, 34-35.
Abstract in Rev. Géol. et Sci. conn., iv, 1923, 109.
Review in Rev. crit. Paléozool., xxvii, 26.

—— 1915 D

A sphenoidal sinus in the dinosaurs.

Science (n.s.), xli, 288-289.
Abstract in Rev. Géol. et Sci. conn., iv, 1923, 109.
Review in Rev. crit. Paléozool., xxvii, 27.

—— 1915 E

The scaled Amphibia of the Coal Measures.

Science (n.s.), xli, 463-464.

—— 1915 F

The migrations and geographic distribution of the fossil Amphibia.

Amer. Jour. Sci. (4), xl, 186-190, 1 map.

—— 1915 G

Some recent studies on fossil Amphibia.

Amer. Naturalist, xlix, 369-376.
Appended is a bibliography of 16 titles.

—— 1915 H

The Coal Measures Amphibia and the Crossoptergia.

Amer. Naturalist, xlix, 637-644.
There is a bibliography of 12 titles.
Abstract in Geol. Mag. (6), iii, 35.

—— 1915 I

A new fish brain from the Coal Measures of Kansas, with a review of other fossil brains.

Jour. Comp. Neur., xxv, 135-181, 19 figs.
The bibliography presents titles of 50 papers.

—— 1915 J

A further contribution to a knowledge of the lateral line system in extinct Amphibia.

Jour. Comp. Neur., xxv, 317-328, 7 figs.
There is a bibliography of 10 works.

Moodie, R. L.—Continued 1916 A

The Coal Measures Amphibia of North America.

Publ. Carnegie Instn. Wash., No. 238, i-x+1-222 pages, pls. i-xxvi, 43 text-figs.

Pages 202-217 are occupied by a bibliography consisting of 645 titles.

Abstracts in Nature, XCVIII, 356; Amer. Jour. Sci. (4), XLII, 502.

——— 1916 B

Bacteriologic and pathologic evidences in past geologic ages.

Trans. Chicago Pathol. Soc., 1916, 84-88.

——— 1916 C

Two caudal vertebræ of a sauropodous dinosaur exhibiting a pathological lesion.

Amer. Jour. Sci. (4), XLI, 530-531, 1 fig.

Abstract in Geol. Zentralbl., XXV, 181.

——— 1916 B

The structure and growth of the plesiosaurian propodial.

Jour. Morphol., XXVII, 401-410, pl. 1, 6 text-figs.

The bibliography presents 9 titles.

Abstract in Rev. Géol. et Sci. conn., IV, 1923, 109-110.

Review in Rev. crit. Paléozool., XXVII, 27.

——— 1916 E

On the sinus paranasales of two early Tertiary mammals.

Jour. Morphol., XXVIII, 135-144, 5 figs.

There is a list of 10 works consulted.

Abstract in Rev. Géol. et Sci. conn., IV, 1923, 109.

Review in Rev. crit. Paléozool., XXVII, 27.

——— 1916 F

The growth of bone in Cretaceous times.

Science (n.s.), XLIII, 35-36.

Abstract in Rev. Géol. et Sci. conn., IV, 1923, 110.

Review in Rev. crit. Paléozool., XXVII, 28.

——— 1916 G

Mesozoic pathology and bacteriology.

Science (n.s.), XLIII, 425-426.

——— 1917 A

The influence of disease in the extinction of races.

Science (n.s.), XLV, 63-64.

——— 1917 B

Studies in paleopathology. I: General consideration of the evidences of pathological conditions found among fossil animals.

Ann. Med. Hist., 1917, 374-393, 20 figs.

Moodie, R. L.—Continued 1918 A

Review of Osborn's *Equidæ of the Oligocene, Miocene and Pliocene of North America.*

Science (n.s.), XLVIII, 171-172.

——— 1918 B

Opisthotonus and allied phenomena among fossil vertebrates.

Amer. Naturalist, LII, 384-394, 8 figs.

——— 1918 C

Palæontological evidence of the antiquity of disease.

Scient. Monthly, VII, 265-281.

——— 1918 D

Pathological evidences of disease among ancient races of man and extinct animals.

Surg., Gynecol. Obstet., 1918, 498-510, 45 figs.

——— 1918 E

Synthesis of palæontology and medical history.

Science (n.s.), XLVIII, 619-620.

——— 1919 A

Opisthotonus.

Science (n.s.), L, 275-276.

——— 1920 A

Ancient bacteria and the beginning of disease.

Scient. Monthly, XI, 362-364.

——— 1920 B

Evolution's most romantic moment.

Scient. Monthly, XI, 464-469, 5 figs.

——— 1920 C

The nature of the primitive haversian system.

Anat. Record, XIX, 47-50, pl. i.

——— 1920 D

Thread molds and bacteria in the Devonian.

Science (n.s.), LI, 14-15.

——— 1920 E

Concerning the fossilization of blood corpuscles.

Amer. Naturalist, LIV, 460-464, 1 fig.

——— 1920 F

Microscopic examination of a fossil fish brain.

Jour. Comp. Neur., XXXII, 329-333, 2 figs.

The bibliography presents 4 titles.

——— 1921 A

Osteomyelitis in the Permian.

Science (n.s.), LIII, 333.

——— 1922 A

The paleopathology of the parasuchians.

Science (n.s.), LVI, 417.

Moodie, R. L.—Continued 1922 B

The influence of the lateral line system on the peripheral osseous elements of fishes and Amphibia.

Jour. Comp. Neur., XXXIV., 318-335, 5 figs.

The bibliography presents 20 titles.

—— 1922 C

On the endocranial anatomy of some Oligocene and Pleistocene mammals.

Jour. Comp. Neur., XXXIV, 343-371, 25 figs.

Appended is a bibliography of 17 titles.

—— 1923 A

An unusual form of Pliocene pathology.

Amer. Jour. Sci. (5), V, 335-336, 1 fig.

Abstract in Geol. Zentralbl., XXX, 23.

—— 1923 B

Paleopathology. An introduction to the study of ancient evidences of disease.

8vo., 1-567 pages, pls. i-cxvii, figs. 1-49, University Press.

Reviewed in Amer. Jour. Sci. (5), VI, 440-442; Jour. Geol., XXXII, 262.

Abstracts in Rev. crit. Paléozool., XXVIII, 65, 1924; Neues Jahrb. Min. Geol. Pal., 1925, I, 290.

—— 1926 A

Studies in paleopathology. XIII: The elements of the haversian system in normal and pathological structures among fossil vertebrates.

Biol. Gen., II, 63-95, pls. v-xvi, 10 text-figs.

In foot-notes are numerous citations of the literature of the subject.

—— 1926 B

A Cretaceous fish spine.

Amer. Naturalist, LX, 290-293, 2 figs.

—— 1927 A

Vertebral lesions in the sabre-tooth, Pleistocene of California, resembling the so-called *Myositis ossificans progressiva* compared with certain ossifications in the dinosaurs.

Ann. Med. Hist., IX, 91-102, 11 figs.

The bibliography cites 12 articles.

—— 1927 B

Tumors in the Lower Carboniferous.

Science (n.s.), LXVI, 541.

—— 1928 A

The Cephalaspidæ.

Science (n.s.), LXVII, 348-349.

Mook, Charles C. 1914 A

The dorsal vertebræ of *Camarasaurus* Cope.

Bull. Amer. Mus. Nat. Hist., XXXIII, 223-227, 3 text-figs.

Brief abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, 331; Nature, London, XCV, 73; Geol. Zentralbl., XXVIII, 446.

—— 1914 B

Notes on *Camarasaurus* Cope.

Ann. N. Y. Acad. Sci., XXIV, 19-22, 1 text-fig.

Abstracts in Bull. Geol. Soc. Amer., XXV, 143; Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 331.

—— 1915 A

Origin and distribution of the Morrison formation.

Bull. Geol. Soc. Amer., 315-322, 4 text-figs.

—— 1916 A

A study of the Morrison formation.

Ann. N. Y. Acad. Sci., XVII, 39-191, pl. VI.

Presents a list of the vertebrates.

The bibliography occupies pages 172-191.

—— 1917 A

Criteria for the determination of species of the Sauropoda, with description of a new species of *Apatosaurus*.

Bull. Amer. Mus. Nat. Hist., XXXVII, 355-358, 2 text-figs.

Abstract in Geol. Zentralbl., XXVIII, 508

—— 1917 B

The fore and hind limbs of *Diplodocus*.

Bull. Amer. Mus. Nat. Hist., XXXVII, 815-819, figs. 1, 2.

Geol. Zentralbl., XXVIII, 508.

—— 1918 A

The habitat of the sauropod dinosaurs.

Jour. Geol., XXVI, 459-470.

—— 1921 A

Skull characters and affinities of the extinct Florida gavial *Gavialosuchus americana* (Sellards).

Bull. Amer. Mus. Nat. Hist., XLIV, 33-41, pls. v-ix, 1 table.

—— 1921 B

Individual and age variations in the skulls of Recent Crocodilia.

Bull. Amer. Mus. Nat. Hist., XLIV, 51-66, pls. x-xii, 4 figs.

—— 1921 C

Notes on the postcranial skeleton in the Crocodilia.

Bull. Amer. Mus. Nat. Hist., XLIV, 67-100, pls. xiii, xiv, 20 text-figs.

Mook, Charles C.—Continued 1921 D
The dermo-supraoccipital bone in the Crocodilia.
Bull. Amer. Mus. Nat. Hist., XLIV, 101-103, 2 figs.

—— 1921 E
Allognathosuchus, a new genus of Eocene crocodilians.
Bull. Amer. Mus. Nat. Hist., XLIV, 105-116, pl. xv.

—— 1921 F
Description of a skull of a Bridger crocodilian.
Bull. Amer. Mus. Nat. Hist., XLIV, 111-116, pls. xvi, xvii.

—— 1921 G
The skull of *Crocodilus acer* Cope.
Bull. Amer. Mus. Nat. Hist., XLIV, 117-121, pls. xviii, xix.

—— 1921 H
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—— 1902 B

Notizen über cretacische Dinosaurier.

Sitz.-Ber. Akad. Wiss. Wien, CXI, Abth. I, 93-114, 1 plate, 1 text-fig.

Discusses the systematic position of the armoured dinosaurs.

Abstracts in Nature, LXVII, 426; Geol. Centralbl., V, 462; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 103-105.

—— 1902 C

Dinosaurierreste aus Siebenbürgen. II: (Schädelreste von *Mochlodon*). Mit einem Anhange: Zur Phylogenie der Ornithopodiden.

Denk. Akad. Wiss. Wien, LXXII, 149-175, pls. i, ii, 11 text-figs.

There are presented numerous references to the literature of the subject.

Abstracts in Geol. Centralbl., V, 463; Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 156; Rev. crit. Paléozool., VII, 15.

—— 1903 A

On the origin of the mosasaurs.

Geol. Mag. (4), X, 119-121.

Abstract in Rev. crit. Paléozool., VII, 132.

—— 1903 B

Neues über *Compsognathus.*

Neues Jahrb. Min. Geol. Pal., Beil.-Bd. XVI, 476-494, pls. xvii, xviii, 4 text-figs.

Abstracts in Geol. Centralbl., V, 463; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 165-166.

Nopcsa, F.—Continued 1903 C

Über die varanusartigen Lacerten Istriens.

Beitr. Pal. Geol. Oesterr.-Ung., xv, 1903, 30-42, pls. v, vi.

Abstracts in Geol. Centralbl., iv, 120, 1903; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 157-159.

——— 1903 D

Ueber *Stegoceras* und *Stereocephalus*.

Centralbl. Min. Geol. Pal., 1903, 266-267.

Abstracts in Geol. Centralbl., v, 462; Jahresber. Anat. Entwickl. (N.F.), ix, pt. 3, 169.

——— 1904 A

Dinosaurierreste aus Siebenbürgen. III (Weitere Schädelreste von *Mochlodon*).

Denk. Akad. Wiss. Wien, lxxiv, 229-263, pls. i, ii, 21 text-figs.

Many references to the literature.

Abstract in Jahresber. Anat. Entwickl. (N.F., x), Abth. 3, 170-171.

——— 1905 A

Notes on British dinosaurs. Part I: *Hypsilophodon*.

Geol. Mag. (5), ii, 203-208, 4 text-figs.

Abstracts in Geol. Centralbl., vii, 263; Jahresber. Anat. Entwickl. (N.F.), xi, pt. 3, 159.

——— 1905 B

Notes on British dinosaurs. Part II: *Polacanthus*.

Geol. Mag. (5), ii, 241-250, pl. xii, 8 text-figs.

Abstracts in Geol. Centralbl., vii, 263.

——— 1905 C

Notes on British dinosaurs. Part III: *Streptospondylus*.

Geol. Mag. (5), ii, 289-293, pl. xv.

Abstracts in Rev. crit. Paléozool., x, 18; Jahresber. Anat. Entwickl. (N.F.), xi, pt. 3, 159; Nature, lxxiii, 15.

——— 1905 D

Remarks on the supposed clavicle of the sauropodous dinosaur *Diplodocus*.

Proc. Zool. Soc. Lond., 1905, ii, 289-294, text-figs. 46-49.

Abstracts in Geol. Centralbl., x, 44; Rev. crit. Paléozool., xi, 74.

——— 1906 A

Zur Kenntnis des Genus *Streptospondylus*.

Beitr. Pal. Geol. Oesterr.-Ung., xix, 1906, 59-83, 18 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xii, pt. 3, 162.

Nopcsa, F.—Continued 1907 A

Ideas on the origin of flight.

Proc. Zool. Soc. Lond., 1907, i, 223-236, text-figs. 74-82.

Abstracts in Geol. Centralbl., x, 370; Sci. Progress, ii, 513; Neues Jahrb. Min. Geol. Pal., 1909, i, Ref., 282; Amer. Jour. Sci. (4), xxv, 528-529.

——— 1908 A

Zur Kenntnis der fossilen Eidechsen.

Beitr. Pal. Geol. Oesterr.-Ung., xxi, 33-62, 1 plate, 5 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xiv, pt. 3, 161.

——— 1911 A

Notes on British dinosaurs. Part IV: *Stegosaurus priscus*, sp. nov.

Geol. Mag. (5), viii, 109-115, text-figs. 1-3; 145-153, text-figs. 4-9.

Abstract in Geol. Centralbl., xvii, 664-665.

——— 1911 B

Omosaurus lennieri, un nouveau dinosaurien du Cap. de la Hève.

Bull. Soc. géol. Normandie, xxx, 1-20, pls. i-vii.

——— 1912 A

Notes on British dinosaurs. Part V: *Craterosaurus* (Seeley).

Geol. Mag. (5), ix, 481-484, 2 text-figs.

——— 1914 A

Die Lebensbedingungen der obercretacischen Dinosaurier Siebenbürgens.

Centralbl. Min. Geol. Pal., 1914, 564-574.

Abstract in Geol. Zentralbl., xxii, 412.

——— 1915 A

Über Geschlechtsunterschiede bei Dinosauriern.

Centralbl. Min. Geol. Pal., 1915, 385-388, 2 text-figs.

Abstract in Geol. Zentralbl., xxii, 446.

——— 1915 B

Die Dinosaurier der siebenbürgischen Landesteile Ungarns.

Mitt. Jahrb. Ungar. Geol. Reichsanst., xxiii, 1-26, pls. i-iv, 3 text-figs.

——— 1916 A

Zu Körpertemperatur der Pterosaurier.

Centralbl. Min. Geol. Pal., 1916, 418-419.

Abstract in Geol. Zentralbl., xxiii, 255.

Nopcsa, F.—Continued 1917 A

Über Dinosaurier. 1: Notizen über die Systematik der Dinosaurier.

Centralbl. Min. Geol. Pal., 1917, 203-213.
There is a bibliography of 14 titles.
Abstract in Geol. Zentralbl., XXIV, 29.

—— 1917 B

Ueber Dinosaurier. 2: Die Riesenformen unter den Dinosauriern. 3: Über die Pubis der Orthopoden.

Centralbl. Min. Geol. Pal., 1917, 332-351, 11 figs.
The bibliography presents 73 titles.

—— 1918 A

Über Dinosaurier. 4: Neues über Geschlectsunterschiede bei Orthopoden.

Centralbl. Min. Geol. Pal., 1918, 186-198, 12 figs.
There is a bibliography of 34 titles.
Abstract in Geol. Zentralbl., XXIV, 187.

—— 1918 B

Notizen über Dinosaurier. 5: Beiträge zu ihrer Evolution.

Centralbl. Min. Geol. Pal., 1918, 235-246.

—— 1918 C

Leipsanosaurus n. gen. Ein neuer Thyreophore aus der Gosau.

Földt. Közl., XLVIII, 324-328, pl. iii.

—— 1921 A

Zur systematischen Stellung von *Poposaurus* (Mehl).

Centralbl. Min. Geol. Pal., 1921, 348.
Abstract in Geol. Zentralbl., XXVIII, 283.

—— 1922 A

Bemerkungen zur Systematik der Reptilien.

Palaeont. Zeitschr., V, 107-118.
Abstract in Geol. Zentralbl., XXXII, 117.

—— 1922 B

Neubeschreibung des Trias-Pterosauriers *Tribelesodon*.

Palaeont. Zeitschr., V, 161-181, pls. i, ii, 7 text-figs.
The bibliography presents 11 titles.
Abstracts in Anz. Akad. Wiss. Wien, 1922, No. 18; Geol. Zentralbl., XXXII, 121.

—— 1922 C

On the probable habits of the dinosaur *Struthiomimus*.

Ann. Mag. Nat. Hist. (9), X, 152-155, 1 fig.

—— 1922 D

A case of secondary adaptation in a tortoise.

Ann. Mag. Nat. Hist. (9), X, 155-157.

Nopcsa, F.—Continued 1923 A

Notes on British dinosaurs, Pt. VI: *Acanthopholis*.

Geol. Mag., LX, 193-199, pls. vii, viii.
Abstracts in Geol. Zentralbl., XXX, 24; 539-540.

—— 1923 B

Vorläufige Notiz über die Pachyostose und Osteosklerose einiger mariner Wirbeltiere.

Anat. Anz., LVI, 353-359.

—— 1923 C

On the origin of flight in birds.

Proc. Zool. Soc. Lond., 1923, 463-477, 7 figs.
The bibliography presents 21 titles.

—— 1923 D

On the geological importance of the primitive reptilian fauna of the uppermost Cretaceous of Hungary; with a description of a new tortoise (*Kallokibotion*).

Quart. Jour. Geol. Soc., LXXIX, 100-116.
The bibliography cites 79 titles.
Abstract in Rev. crit. Paléozool., XXVII, 210; Neues Jahrb. Min. Geol. Pal., 1925, II, 88-89.

—— 1923 E

Reversible and irreversible evolution; a study based on reptiles.

Proc. Zool. Soc. Lond., 1923, 1045-1059, 2 text-figs.
The bibliography presents 19 titles.

—— 1923 F

Kallokibotium, a primitive amphichelydean tortoise from the uppermost Cretaceous of Hungary.

Palaeont. Hungarica, I, 1-34, pls. i-iv, 5 text-figs.
A bibliography of 74 titles is presented.

—— 1923 G

Eidolosaurus und *Pachyophis*: Zwei neue Neocom-Reptilien.

Palaeontogr., LXV, 96-154, pls. vii, viii.
Appended is a bibliography of 141 titles.

—— 1923 H

Die Familien der Reptilien.

Fortschr. Geol. Palaeont., Heft II, i-iv; 1-210, pls. i-vi.
There are numerous references in the footnotes to the literature pertaining to the subject.
Comment on in Naturwissenschaften, Berlin, 1925, XIII, 437.

—— 1924 A

Über die Namen einiger brasilianischer fossiler Krokodile.

Centralbl. Min. Geol. Pal., 1924, 378.
Abstract in Geol. Zentralbl., XXXII, 120.

Nopcsa, F.—Continued 1924 B

Bemerkungen und Ergänzungen zu G. v. Arthaber's Arbeit über Entwicklung und Absterben der Pterosaurier.

Palaeont. Zeitschr., VI, 80-91.

Abstract in Geol. Zentralbl., XXXII, 122.

—— 1924 C

On the systematic position of *Saurosternon* and *Tangasaurus*.

S. Afric. Jour. Sci., XXI, 206-207.

—— 1925 A

Wirbeltier-Reste der Baharije-Stufe (unterstes Cenoman). 5: Die *Symoliophis*-Reste.

Abh. Bayer. Akad., XXX, Bd. 4, 1-27, pl. i, 2 text-figs.

—— 1925 B

On some reptilian bones from the Eocene of Sokoto.

Geol. Surv. Nigeria., Occas. Pap. No. 2, 1-16, 1 pl., 1 text-fig.

The bibliography records 11 titles.

—— 1925 C

Über die von Professor Stromer im Cenoman Aegyptens entdeckten Reste von *Symoliophis*.

Palaeont. Zeitschr., VII, 164-165, 166.

—— 1926 A

Heredity and evolution.

Proc. Zool. Soc. Lond., 1926, 633-665, 9 text-figs.

In the bibliography are 116 titles.

Nordenskiöld, Erland 1900 A

La grotte du *Glossotherium* (*Neomylodon*) en Patagonie.

Bull. Soc. géol. France (3), XXVIII, 29-32.

—— 1903 A

Ueber die Säugetierfossilien des Tarijatals, Südamerika, I: *Mastodon andium* Cuv.

Svensk. Vet. Akad. Handl., XXXVII, No. 4, 1-30, pls. i-vi. See also Bull. Geol. Inst. Upsala, v, 1902.

There are numerous references to the literature of the subject.

Abstract in Geol. Centralbl., XIII, 109-110.

Norman, E. W. 1926 A

The development of the chondrocranium of the eel (*Anguilla vulgaris*), with observations on the comparative morphology and development of the chondrocranium in bony fishes.

Phil. Trans. Roy. Soc. Lond., B, CCXIV, 369-464, 56 figs.

The bibliography (pages 458-463) records 85 titles. Additional titles are in foot-notes.

Norris, H. W. 1903 A

The membrane bones in the skull of a young *Amphiuma*.

Proc. Iowa Acad. Sci., X, 69-74.

—— 1908 A

The cranial nerves of *Amphiuma means*.

Jour. Comp. Neur., XVIII, 527-559, pls. iv-viii.

There is a bibliography of 21 titles.

—— 1913 A

On certain features of the anatomy of *Siren lacertina*.

Anat. Anz., XLIII, 516-519.

—— 1913 B

The cranial nerves of *Siren lacertina*.

Jour. Morphol., XXIV, 245-338, 44 figs.

The bibliography occupies pages 336-338.

Norsa, Elisa 1895 A

Recherches sur la morphologie des membres antérieurs des oiseaux.

Arch. ital. Biol., XXII, 232-241.

Norton, A. H. 1924 A

Another fossil caribou from New York State.

Jour. Mamm., V, 132-133.

Norton, O. D. 1875 A

Discovery of the horns of an extinct species of ox in Ohio.

Amer. Jour. Sci. (3), X, 386.

Probably extracted from Cincinnati Gazette. (See Smith, H. P., 1887 A, page 20.)

Norton, William Harmon 1901 A

Geology of Cedar County [Iowa].

Iowa Geol. Surv., XI, 1900, 281-396, with maps.

—— 1906 A

The geology of Bremer County [Iowa].

Iowa Geol. Surv., XVI, 321-405, map and illustrations.

Nowikoff, M. 1907 A

Über das Parietalauge von *Lacerta agilis* und *Anguis fragilis*.

Biol. Centralbl., XXVII, 364-370, 5 text-figs.

—— 1909 A

Untersuchungen über die Structur des Knochens.

Zeitschr. wiss. Zool., XCII, 1-50, pls. i-v, 1 text-fig.

In this paper the author's name is given as Novikov, M. M.

Nowikoff, M.—Continued 1910 A
Untersuchungen über den Bau, die Entwicklung und die Bedeutung des Parietalauges von Sauriern.
Zeitschr. wiss. Zool., XCVI, 118-207, pls. iii-viii, 10 text-figs.
Brief abstract in Nature, LXXXIV, 469-470.

—— 1910 B
Zur Frage über die Paarigkeit der Epiphyse und des Parietalauges der Saurier.
Biol. Zeitschr. Moscou, I, 167.
Abstract in German of paper in Russian on pages 161-166.

—— 1912 A
Über die Entwicklung und morphologische Bedeutung des Parietalauges bei Sauriern.
Verh. internat. Zool.-Kongr., VIII, Graz, 1910, 334-338.

Nunn, Emily 1882 A
On the development of the enamel of the teeth of vertebrates.
Proc. Roy. Soc. Lond., XXXIV, 156-165, pls. ii-iv.

Nusbaum, Joseph 1881 A
Ueber das anatomische Verhältnis zwischen dem Gehörorgane und der Schwimmblase bei den Cyprinoiden.
Zool. Anz., IV, 552-556.

—— 1907 A
Zur Histogenese der Lederhaut und die Cycloidschuppen der Knochenfische.
Anat. Anz., XXX, 297-310, 10 figs.

—— 1908 A
Entwickelungsgeschichte und morphologische Beurteilung der Occipitalregion des Schädels und der Weberschen Knöchelchen bei den Knochenfischen (*Cyprinus carpio* L).
Anat. Anz., XXXII, 513-532, 14 figs.
There are numerous references to the papers of other authors.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 76.

—— 1908 B
Zur Entwicklungsgeschichte der Occipitalregion des Schädels und der Weberschen Knöchelchen bei den Cyprinoiden.
Bull. internat. Acad. Sci. Cracovie. Cl. math. nat., 1908, 505-508.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 76.

Obalski, T. 1904 A
Les grands mammifères fossiles dans le Yukon et l'Alaska.
Bull. Mus. hist. nat. Paris, X, 214-217.
Published in Rev. Scient. (5), VI, 79-81; also in La Nature, XXXII, 3-5.
Abstract in Geol. Centralbl., V, 460.

Oberholser, Harry C. 1908 A
A synopsis of the genera and species of Cygninæ.
Emu, VIII, 1-11.

O'Donoghue, Charles H. 1913 A
A table for use in the identification of birds' skulls.
Zool. Anz., XLI, 465-468.

Oehngren, Siri 1919 A
Über die sog. Episternalbildungen bei den Säugetieren.
Anat. Anz., LII, 161-187, 20 figs.
The bibliography presents 27 titles.

Oertel, Walter 1914 A
Toxochelys gigantea nov. sp.; eine neue Schildkröte aus dem Aptien von Hannover.
Jahresber. Niedersachs. geol. Ver., VII, 91-106, 1 fig.
Abstract in Geol. Zentralbl., XXI, 589.

—— 1924 A
Die Schildkröten fauna des nordwestdeutschen oberen Jura.
Palaeont. Zeitschr., VI, 42-79, 17 figs.
In the bibliography 72 titles are recorded.

Ogilby, J. Douglas 1911 A
On the genus "*Gonorrhynchus*" (Gronovius).
Ann. Queensl. Mus., No. 10, 30-35.

Ogushi, K. 1911 A
Anatomische Studien an der japanischen dreikralligen Lippenschildkröte (*Trionyx japanicus*). I Mitteilung.
Morphol. Jahrb., XLIII, 1-106, 4 text-figs., pls. i-vi.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 71.

—— 1911 B
Berichtigung zur Mittheilung über anatomische Studien an der japanischen Lippenschildkröte.
Morphol. Jahrb., XLIV, 127.

—— 1913 A
Anatomische Studien an der japanischen dreikralligen Lippenschildkröte (*Trionyx japanicus*). II. Muskel- und peripheres Nervensystem.
Morphol. Jahrb., XLVI, 299-562, text-figs. 5-42, pls. vi-xiii, figs. 50-77.

O'Harra, Cleoppas C. 1910 A

The badland formations of the Black Hills region.

Bull. S. Dakota Sch. Mines, IX, 1-152, pls. i-l, 20 text-figs.

A bibliography occupies pages 135-144.

On pages 125-134 is a list of the species of fossil vertebrates that have been found in the badland formations of the Black Hills region.

—— 1916 A

Note on locality of a fossil fish.

Amer. Jour. Sci. (4), XLI, 347.

In Hussakof, L., 1916 A.

—— 1920 A

The White River Badlands.

Bull. S. Dakota Sch. Mines, XIII, 1-181, pls. i-xcvi, 75 text-figs.

Ohm, 1908 A

Die Lehre vom Zahnalter.

Zeitschr. Veterinark., XX, 356-365.

Discusses the structure and condition of the teeth of horses at various ages.

Okajima, Keji 1908 A

Die Osteologie des *Onychodactylus japonicus.*

Zeitschr. wiss. Zool., XCI, 351-381, pl. xiii, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 77, 96.

Oken, L. 1818 A

Wie Oken zur Deutung der Schädelknochen gekommen ist.

Isis von Oken, II, 512.

—— 1819 A

Bein-Philosophie: Umgerissen von O[ken].

Isis von Oken, V, 1528-1548, pl. xviii.

—— 1823 A

Zahnsystem.

Isis von Oken, 1823, Lit. Anz., 274-350.

—— 1823 B

Brustgerüste, Schultergerüste, Becken.

Isis von Oken, 1823, Lit. Anz., 444-455.

Olcott, Theodore F. 1909 A

A new species of *Teleoceras* from the Miocene of Nebraska.

Amer. Jour. Sci. (4), XXVIII, 403-404.

Abstract in Geol. Centralbl., XV, 217.

Olmstead, Miriam P. 1911 A

Das Primordialcranium eines Hundeembryo. Ein Beitrag zur Morphologie des Säugetierschädels.

Anat. Hefte, Arb., XLIII, 335-375, pls. xxxiv-xliii.

Twenty-two titles are listed in the bibliography.

Oppenheim, Stefanie 1911 A

Zur Typologie des Primatencraniums.

Zeitschr. Morphol. Anthrop., XIV, 1-203, pls. i-xiv, 34 text-figs.

The bibliography of the subject occupies pages 199-203.

Ortmann, Arnold Edward 1901 A

Some remarks on President D. S. Jordan's article on the geographical distribution of fishes.

Science (n.s.), XIV, 694-695.

For remarks on by D. S. Jordan, see Science (2), XIV, 936.

—— 1909 A

Eine miozäne Tragödie.

Aus der Natur, Leipzig, Jahrg., V, 21-24, 1 text-fig.

On *Promerycochoerus carrikeri.*

—— 1909 B

Teufels-Korkzieher.

Aus der Natur, Leipzig, Jahrg., V, 177-180, 3 text-figs.

Orton, Edward 1870 A

On the occurrence of a peat bed beneath deposits of drift in southwestern Ohio.

Amer. Jour. Sci. (2), L, 54-57.

—— 1873 A

Geology of Hamilton County [Ohio].

Geol. Surv. Ohio, I, pt. 1, 419-434, with map.

—— 1878 A

Report on the geology of Franklin County.

Geol. Surv. Ohio, III, pt. 1, 596-646, with map.

Osawa, Gakutaro 1901 A

Beiträge zur Anatomie des japanischen Riesensalamanders.

Mitt. med. Facultät Kais-japan, Univ. Tokio, V, 221-427, pls. xi-liv.

The bibliography cites 201 titles.

Osborn, H. F. 1893 M

A new suborder of the Ancylopoda.

Trans. N. Y. Acad. Sci., XII, 95-96 (Abstract).

—— 1893 N

The evolution of teeth in Mammalia in its bearing upon the problem of phylogeny.

Trans. N. Y. Acad. Sci., XII, 187 (Abstract).

—— 1897 H

A great naturalist: Edward Drinker Cope.

Cent. Mag. (n.s.), XXXIII; (o.s. LV), 1897, 10-15, portrait of Cope.

Osborn, H. F.—Continued 1897 I
Abstracts of papers read before New York Academy of Sciences.
Science (n.s.), VI, 107.

—— 1898 I
Abstract in Geol. Mag. (4), V, 374.

—— 1898 O
Abstract in Nature, LVIII, 426-427.

—— 1898 S
Reconstruction and model of *Phenacodus primævus* Cope.
Rept. Brit. Assoc. Adv. Sci., 67th Meet., Toronto, 1897, 684.

—— 1898 T
On skeletons and restorations of Tertiary Mammalia.
Rep. Brit. Assoc. Adv. Sci., LXVII, Toronto, 1897, 684.

—— 1898 U
The origin of the Mammalia.
Rep. Brit. Assoc. Adv. Sci., 67th Meet., Toronto, 1897, 686-687.

—— 1898 V
Wasatch and Bridger beds in the Huerfano lake basin.
Proc. Amer. Assoc. Adv. Sci., XLVI, 205-206.

—— 1899 J
The origin of mammals.
Proc. internat. Zool. Congr., IV, Cambridge, 1898, 415-419.
This paper, with only slight differences, appeared first in the February number of vol. VII, 1899, of the Amer. Jour. Sci.

—— 1899 K
Fossil vertebrates in the American Museum of Natural History.
Nature, LIX, 272-275, 5 figs.

—— 1900 A
Abstracts in Geol. Centralbl., II, 89; Anat. Hefte, Ergebn., XIV, 1084.

—— 1900 C
Abstract in Geol. Centralbl., II, 87.

—— 1900 F
Abstract in Geol. Centralbl., II, 87.

—— 1900 I
Abstract in Geol. Centralbl., I, 700.

—— 1900 J
Abstract in Anat. Hefte, Ergebn., XIV, 1084.

—— 1900 K
Reviewed in Geol. Mag. (4), VII, 1900, 417-419.

Osborn, H. F.—Continued 1901 A
Des méthodes précises mises actuellement en oeuvre dans l'étude des vertébrés fossiles des Etats-Unis d'Amérique.
C. R. Congr. Geol. internat. Paris, VIII, 353-356, pls. i, ii.
The plates show the skeletons of *Equus scotti* and of *Protorohippus*, and a restoration of *Protorohippus*.
Abstract in Geol. Centralbl., III, 112.

—— 1901 B
Corrélation des horizons de mammifères tertiares en Europe et en Amérique.
C. R. Congr. Geol. Internat. VIII, Paris, 1900, 357-363.
Abstract in Geol. Centralbl., III, 105.

—— 1901 C
The recent progress of vertebrate paleontology in America.
Science (n.s.), XIII, 45-49.
Abstract in Geol. Centralbl., II, 799.

—— 1901 D
Systematic revision of the American Eocene primates and of the rodent family Mixodectidæ.
Science (n.s.), XIII, 623-624 (abstract).

—— 1901 E
Discoveries of *Plesiosaurus* and of *Portheus*.
Science (n.s.), XIV, 331.

—— 1901 F
Recent zoopaleontology.
Science (n.s.), XIV, 330-331, 498-499, 578-580, 622, 699-700.

—— 1901 G
Summer work of the department of vertebrate palæontology.
Amer. Mus. Jour., I, 159-160.

—— 1901 H
The phylogeny of the rhinoceroses of Europe.
Ann. N. Y. Acad. Sci., XIII, 505.

—— 1902 A
Dolichocephaly and brachycephaly in the lower mammals.
Bull. Amer. Mus. Nat. Hist., XVI, 77-89, 5 figs.
Abstracts in Ann. N. Y. Acad., XIV, 147 (1902); Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 302-304; Geol. Centralbl., IV, 398; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 107-108.

Osborn, H. F.—Continued 1902 B

The four phyla of Oligocene titanotheres.

Bull. Amer. Mus. Nat. Hist., XVI, 91-109, figs. 1-13.

Abstracts in Science (n.s.), XV, 626; Ann. N. Y. Acad. Sci., 1903, XV, 44-45; Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 297-298; Geol. Centralbl., IV, 399; Rev. crit. Paleozool, VII, 7; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 119.

——— 1902 C

American Eocene primates and the supposed rodent family Mixodectidæ.

Bull. Amer. Mus. Nat. Hist., XVI, 169-214, 40 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, I, Ref., 290-294; Geol. Centralbl., IV, 475; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 114-115.

——— 1902 D

Homoplasy as a law of latent or potential homology.

Amer. Naturalist, XXXVI, 259-271, 6 text-figs.

Abstracts in Geol. Centralbl., IX, 659; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 84-87.

——— 1902 E

The law of adaptive radiation.

Amer. Naturalist, XXXVI, 353-363, 4 text-figs.

Abstracts in Geol. Centralbl., IX, 659; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 85.

——— 1902 F

The four phyla of titanotheres.

Science (n.s.), XV, 626.

An abstract of Osborn, H. F., 1902 B.

——— 1902 G

Recent zoopaleontology.

Science (n.s.), XV, 355-357, 514.

——— 1902 H

Recent zoopaleontology.

Science (n.s.), XVI, 673-676, 713-715, 749-752.

——— 1902 I

On Vertebrata of the Mid-Cretaceous of the Northwest Territory. I: Distinctive characters of the Mid-Cretaceous fauna.

Contrib. Canad. Pal., III (4to), pt. II, 1-21.

Abstract in Geol. Centralbl., IX, 653. Note on in Canad. Rec. Sci., IX, 86; Rev. crit. Paléozool., VII, 21.

Osborn, H. F.—Continued 1903 A

Ornitholestes hermanni; a new compsognathoid dinosaur from the Upper Jurassic.

Bull. Amer. Mus. Nat. Hist., XIX, 459-464, text-figs. 1-3.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1906, I, Ref., 152; Geol. Centralbl., V, 143; Rev. crit. Paléozool., VIII, 81-82; Jahresber. Anat. Entwickl. (N. F.), IX, pt. 3, 167.

——— 1903 B

Glyptotherium texanum, a new glyptodont from the lower Pleistocene of Texas.

Bul. Amer. Mus. Nat. Hist., XIX, 491-494, pl. xliii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 306; Rev. crit. Paléozool., IX, 5; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 185.

——— 1903 C

The skull of *Creosaurus*.

Bull. Amer. Mus. Nat. Hist., XIX, 697-701, 2 text-figs.

Abstracts in Rev. crit. Paléozool., VIII, 210; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 167.

——— 1903 D

Recent zoopaleontology.

Science (n.s.), XVII, 157-158, 312-314, 356-357, 673-674.

Abstract in Jahresber. Anat. Entwickl., (N.F.), X, Abth. 3, 154-155. Also in Geol. Centralbl., IX, 636, 637, 660.

——— 1903 E

Evolution of the Proboscidea in North America.

Science (n.s.), XVII, 249.

——— 1903 F

On the primary division of the Reptilia, into two sub-classes, Synapsida and Diapsida.

Science (n.s.), XVII, 275-276.

——— 1903 G

Recent zoopaleontology.

Science (n.s.), XVIII, 665-668, 699-702, 835-837.

Abstract in Geol. Centralbl., IX, 659.

——— 1903 H

The reptilian subclasses Diapsida and Synapsida and the early history of the Diaptosauria.

Mem. Amer. Mus. Nat. Hist., I, 449-507, pl. xl, 24 text-figs.

Abstracts in Geol. Centralbl., IX, 661-662; Rev. crit. Paléozool., VIII, 84-90; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 154-156.

Osborn, H. F.—Continued 1903 I

On recent models and restorations of a number of extinct animals, with a discussion of their probable habits and mode of life.

Science (n.s.), XVIII, 978.

An abstract.

——— 1904 A

An armadillo from the Middle Eocene (Bridger) of North America.

Bull. Amer. Mus. Nat. Hist., XX, 163-165.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 187; Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 163-165; Rev. crit. Paléozool., IX, 3.

——— 1904 B

New oligocene horses.

Bull. Amer. Mus. Nat. Hist., XX, 167-179; pls. iv, v; text-figs. 1-8.

Abstracts in Jahresber. Anat. Entwickl. (N. F.), X, Abth. 3, 182; Rev. crit. Paléozool., IX, 4.

——— 1904 C

Manus, sacrum, and caudals of Sauropoda.

Bull. Amer. Mus. Nat. Hist., XX, 181-190, 6 text-figs.

Abstracts in Jahresber. Anat. Entwickl. (N. F.), X, Abth. 3, 171-172; Rev. crit. Paléozool., VIII, 210.

——— 1904 D

New Miocene rhinoceroses with revision of known species.

Bull. Amer. Mus. Nat. Hist., XX, 307-326, 21 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1906, II, Ref, 133-135; Jahresber. Anat. Entwickl (N.F.), X, Abth. 3, 181; Rev. crit. Paléozool., IX, 68.

——— 1904 E

The great Cretaceous fish *Portheus molossus* Cope.

Bull. Amer. Mus. Nat. Hist., XX, 377-381, pl. X, 4 text-figs.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 159; Rev. crit. Paléozool., IX, 77.

——— 1904 F

Revised list of casts, models, photographs and restorations of fossil vertebrates.

Bull. Amer. Mus. Nat. Hist., XX, App., 1-52, 8 text-figs.

——— 1904 G

Palæontological evidence for the original tritubercular theory.

Amer. Jour. Sci. (4), XVII, 321-323, pl. XXI.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 177; Rev. crit. Paléozool., IX, 2-3.

Osborn, H. F.—Continued 1904 H

Reclassification of the Reptilia.

Amer. Naturalist, XXXVIII, 93-115, 13 text-figs.

Abstracts in Geol. Centralbl., IX, 661; Nature, LXXI, 615; Rev. crit. Paléozool., VIII, 206-209; Geol. Mag. (5), I, 517.

——— 1904 I

Recent zoopaleontology.

Science (n.s.), XIX, 35-36, 271-272.

——— 1904 J

On the position of the bones of the forearm in the *Opisthocoelia* or *Sauropoda*.

Science (n.s.), XIX, 255-256.

——— 1904 K

Conclusive paleontological evidence for the tritubercular theory.

Science (n.s.), XIX, 256.

——— 1904 L

A reclassification of the Reptilia.

Science (n.s.), XIX, 256-257 (abstract).

——— 1904 M

On the primary components of vertebræ and their relations to ribs.

Science (n.s.), XIX, 257.

——— 1904 N

The classification of the Reptilia.

Science (n.s.), XIX, 307-308.

——— 1904 O

Recent advances in our knowledge of the evolution of the horse.

Proc. Amer. Philos. Soc., XLIII, 156-157.

Abstract in Science (n.s.), XIX, 717.

——— 1904 P

Teleorhinus browni—a teleosaur in the Fort Benton.

Bull. Amer. Mus. Nat. Hist., XX, 239-240.

Abstracts in Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 169; Rev. crit. Paléozool., IX, 71; Jour. Geol., XIII, 184.

——— 1904 Q

Fossil wonders of the West. The dinosaurs of the Bone-Cabin quarry.

Cent. Mag., LXVIII (n.s. XLVI) Sept., 680-694, 16 illustrations.

Abstract in Nature, London, LXXI, 279.

Reprint in Handbook series, No. 5, Amer. Mus. Nat. Hist., 1915, 131-152.

——— 1904 R

The evolution of the horse in America.

Cent. Mag., LXIX (n.s. XLVII), 3-17, with 12 figs.

For a correction see page 317 of same volume.

Osborn, H. F.—Continued 1904 S

Abstracts of papers read at meeting of National Academy of Sciences.

Scient. Amer., xc, 366.

——— 1905 A

Tyrannosaurus and other Cretaceous carnivorous dinosaurs.

Bull. Amer. Mus. Nat. Hist., xxi, 259-265, 2 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, ii, Ref., 492; Geol. Centralbl., xii, 221; and in Nature, lxxiii, 229-230.

——— 1905 B

Recent discoveries of extinct animals in the Rocky Mountain region and their bearings on the present problems of evolution.

Science (n.s.), xxi, 28.

See Ann. N. Y. Acad. Sci., xvi, 358.

——— 1905 C

The phylogeny and classification of the Reptilia.

Science (n.s.), xxi, 294-295.

——— 1905 D

Recent zoopaleontology.

Science (n.s.), xxi, 315-316.

Brief abstract in Geol. Centralbl., x, 465.

——— 1905 E

Fossil mammals of Mexico.

Science (n.s.), xxi, 931-932.

Abstracts in Geol. Centralbl., x, 465; Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 126-127.

——— 1905 F

Recent vertebrate paleontology.

Science (n.s.), xxii, 188-189.

Brief abstract in Geol. Centralbl., x, 188-189.

——— 1905 G

Skull and skeleton of the sauropodous dinosaurs, *Morosaurus* and *Brontosaurus*.

Science (n.s.), xxii, 374-376.

——— 1905 H

Ten years progress in the mammalian palaeontology of North America.

Amer. Geologist, xxxvi, 199-229, pl. xii, 7 text-figs.

Noted in Geol. Centralbl., x, 465.

——— 1905 I

Ten years progress in the mammalian palaeontology of North America.

Verh. internat. Zool.-Kongr., vi, Bern, 1904, 86-113, pls. i-xv, 7 text-figs.

Résumé in Neues Jahrb. Min. Geol. Pal., 1907, i, Ref., 454-458.

Osborn, H. F.—Continued 1905 J

Evolution of the horse. Recent discoveries and studies.

Verh. internat. Zool.-Kongr., vi, Bern, 1904, 282.

——— 1905 K

The evolution of the horse.

Rep. Brit. Assoc. Adv. Sci., lxxiv, Cambridge, 1904, 607-608.

——— 1905 L

Western explorations for fossil vertebrates.

Pop. Sci. Month., lxvii, 561-568, 6 figs.

——— 1905 M

Ichthyosaurs. The evolution of fitness in ichthyosaurs.

Cent. Mag., lxix (n.s. xlvii), 414-422, 6 illustrations.

——— 1905 N

The present problems of paleontology.

Pop. Sci. Month., lxvi, 226-242.

——— 1905 O

The ideas and terms of modern philosophical anatomy.

Science (n.s.), xxi, 959-961.

——— 1906 A

Tyrannosaurus, Upper Cretaceous carnivorous dinosaur (2d comm.).

Bull. Amer. Mus. Nat. Hist., xxii, 281-296, pl. xxxix, 12 text-figs.

Abstracts in Sci. Progress, i, 456; Nature, London, lxxiv, 416; Rev. crit. Paléozool., 145-146; Jahresber. Anat. Entwickl. (N.F.), xii, pt. 3, 163.

——— 1906 B

Recent vertebrate paleontology.

Science (n.s.), xxiv, 55-57.

——— 1906 C

The causes of extinction of Mammalia.

Amer. Naturalist, xl, 769-795, 829-859.

Abstracts in Geol. Centralbl., xi, 473; Rev. crit. Paléozool., xi, 207-211.

——— 1906 D

The skeleton of *Brontosaurus* and skull of *Morosaurus*.

Nature, lxxiii, 282-284, 4 text-figs.

Abstracts in Geol. Centralbl., vii, 661; xi, 108-109; Neues Jahrb. Min. Geol. Pal., 1910, ii, Ref., 143.

——— 1906 E

Preface to ["The Arab Horse," by Spencer Borden].

vii-xiii pages.

Osborn, H. F.—Continued 1906 F

Mountain goat hunting with the camera.

Rep. N. Y. Zool. Soc., x, 217-233, 17 figs.

—— 1907 A

Tertiary mammal horizons of North America.

Bull. Amer. Mus. Nat. Hist., xxiii, 237-253, 3 text-figs.

Reviewed in Amer. Jour. Sci. (4), xxiv, 504-505. Abstracts in Geol. Centralbl., xi, 376; Rev. crit. Paléozool., xi, 211-213; Sci. Progress, ii, 501.

—— 1907 B

A mounted skeleton of the Columbian mammoth (*Elephas columbi*).

Bull. Amer. Mus. Nat. Hist., xxiii, 255-257, 1 text-fig.

Brief abstracts in Geol. Centralbl., xi, 379; Sci. Progress, ii, 511; Rev. crit. Paléozool., xi, 219.

—— 1907 C

Points of the skeleton of the Arab horse.

Bull. Amer. Mus. Nat. Hist., xxiii, 259-263, 3 text-figs.

Reviewed in Amer. Jour. Sci. (4), xxiv, 380-381.

—— 1907 D

A mounted skeleton of *Naosaurus*, a pelycosaur from the Permian of Texas.

Bull. Amer. Mus. Nat. Hist., xxiii, 265-270, pls. ix, x, 3 text-figs.

Abstracts in Sci. Progress, ii, 519; Rev. crit. Paléozool., xi, 226; Jahresber. Anat. Entwickl. (N.F.), xiii, pt. 3, 165-167.

—— 1907 E

Evolution as it appears to the paleontologist.

Science (n.s.), xxvi, 744-749.

Abstract in Rev. crit. Paléozool., 13, 150.

—— 1907 F

A paleontological trip to northwestern Nebraska.

Science (n.s.), xxvi, 871-872.

—— 1907 G

Evolution of mammalian molar teeth to and from the triangular type.

8vo., 1-250, 215 text-figs. Edited by W. K. Gregory.

Abstracts in Science (n.s.), xxvii, 341-342; Anat. Record, ii, 221-225; Rev. crit. Paléozool., xii, 223; Amer. Jour. Sci. (4), xxv, 264; Jahresber. Anat. Entwickl. (N.F.), xiv, pt. 3, 161.

—— 1907 H

The reclassification of the Mammalia.

Ann. N. Y. Acad. Sci., xvii, 611-613.

Osborn, H. F.—Continued 1907 I

Foreword to the monographs on vertebrate palæontology.

U. S. Geol. Surv. Mon., xlix, pages xiii-xv.

—— 1907 J

Explorations of John Bell Hatcher for the paleontological monographs of the United States Geological Survey, together with a statement of his contributions to American geology and paleontology. A biographical sketch of John Bell Hatcher.

U. S. Geol. Surv. Mon., xlix, pages xvii-xxvi.

This sketch contains a list of Hatcher's scientific papers.

—— 1907 K

Hunting the ancestral elephant in the Fayûm Desert.

Cent. Mag., lxxiv (n.s. lii), 815-835, 20 illustrations.

Brief abstract in Geol. Centralbl., xi, 28. Abstract in Sci. Progress, ii, 503.

—— 1908 A

New or little known titanotheres from the Eocene and Oligocene.

Bull. Amer. Mus. Nat. Hist., xxiv, 599-617, 21 text-figs.

Abstracts in Geol. Centralbl., xiii, 395-396; Rev. crit. Paléozool., xiii, 143; Amer. Jour. Sci. (4), xxix, 90.

—— 1908 B

The four inseparable factors of evolution. Theory of their distinct and combined action in the transformation of the titanotheres, an extinct family of hoofed animals in the order of Perissodactyla.

Science (n.s.), xxvii, 148-150.

Abstract in Rev. crit. Paléozool., xiii, 150.

—— 1908 C

Dolicocephaly and brachycephaly in titanotheres.

Science (n.s.), xxvii, 255.

—— 1908 D

Coincident evolution through rectigradations and fluctuations.

Science (n.s.), xxvii, 749-752, 3 text-figs.

Abstract in Rev. crit. Paléozool., xiii, 150.

—— 1909 A

Communications and remarks before American Society of Vertebrate Paleontologists.

Science (n.s.), xxix, 197-198.

Osborn, H. F.—Continued 1909 B

The epidermis of an iguanodont dinosaur.

Science (n.s.), XXIX, 793-795.

Abstract in Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 298.

——— 1909 C

The upper Cretaceous iguanodont dinosaurs.

Nature, LXXXI, 160-162, 2 figs. See also note on pages 194-195.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 321; Geol. Centralbl., XIII, 438.

——— 1909 D

Cenozoic mammal horizons of western North America.

Bull. U. S. Geol. Surv., CCCLXI, 1-90, 3 pls. and 15 text-figs.

A bibliography occupies pages 9-18.

Abstracts in Amer. Jour. Sci. (4), XXIX, 88-89; Geol. Centralbl., XIII, 393-394; Rev. crit. Paléozool., XIII, 147-149; Jour. Geol., XIX, 95.

——— 1909 E

The feeding habits of *Mœritherium* and *Palæomastodon*.

Nature, LXXXI, 139-140, 2 figs.

——— 1910 A

Correlation of the Cenozoic through its mammalian life.

Jour. Geol., XVIII, 201-215, 4 figs.

Reprinted in Bailey Willis and R. D. Salisbury's "Outlines of Geologic History," Univ. of Chicago Press, 1910, pages 251 to 264.

Abstract in Geol. Centralbl., XVI, 49.

——— 1910 B

The age of mammals in Europe, Asia and North America.

New York, The Macmillan Co., 8vo., i-xvii+1-635 pages, with 220 figs. Pages 515-563 form an appendix in which is presented a classification of the Mammalia.

Reviews in Amer. Jour. Sci. (4), XXXI, 150-151, Amer. Mus. Jour., XI, 1911, 65-67; Sci. Progress, V, 660; Bull. Amer. Geogr. Soc., XLIII, 541; Rev. crit. Paléozool., XV, pages i-xii; Geol. Centralbl., XIX, 393; Nature, LXXXVIII, 135-136; Amer. Mus. Jour., XI, 65; Bull. Amer. Geogr. Soc., XLIII, 541.

Abstract in Winge, H., 1923 A, p. 185.

——— 1910 C

Paleontologic evidences of adaptive radiation.

Pop. Sci. Month., LXXVII, 77-81.

Osborn, H. F.—Continued 1910 D

Evolution as it appears to the paleontologist.

Proc. internat. Zool. Congr., VII, Boston, 1907, 733-739.

Issued also as a reprint, 1-7; also same as Osborn, H. F., 1907 E.

——— 1911 A

Biological conclusions drawn from the study of the titanotheres.

Science (n.s.), XXXIII, 825-828.

——— 1911 B

A dinosaur mummy.

Amer. Mus. Jour., XI, 7-11, 4 figs.

Abstracts in Geol. Centralbl., 42; Nature, LXXXV, 520; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 209; Sci. Progress, VI, 568, fig.

——— 1911 C

Palæontology.

Encyclop. Brit., ed. 11, XX, 559-591, 10 figs.

——— 1912 A

Craniometry of the Equidæ.

Mem. Amer. Mus. Nat. Hist. (n.s.), I, pt. III, 55-100, 17 text-figs.

Abstract in Geol. Centralbl., XIX, 651; Rev. crit. Paléozool., XVII, 203.

——— 1912 B

The continuous origin of certain unit characters as observed by a paleontologist.

Amer. Naturalist, XLIV, 185-206, 249-278, 8 text-figs.

——— 1912 C

Phylogeny and ontogeny of the horns of mammals.

Science (n.s.), XXXV, 595-596.

——— 1912 D

Skull measurements in man and the hoofed mammals.

Science (n.s.), XXXV, 596.

——— 1912 E

Tetraplasy, a law of the four inseparable factors of evolution.

Proc. Acad. Nat. Sci. Phila., LXIV, 144-146.

——— 1912 F

Tetraplasy, the law of the four inseparable factors of evolution.

Jour. Acad. Nat. Sci. Phila. (2), XV, 277-309.

Abstract in Rev. crit. Paléozool., XVII, 195.

Osborn, H. F.—Continued 1912 G

Symposium on ten years progress in vertebrate paleontology. Correlation and paleogeography.

Bull. Geol. Soc. Amer., XXIII, 232-256, 11 text-figs.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Lull, Hay, Merriam, Dean, Eastman, Williston and Sinclair.

——— 1912 H

Evolution as it appears to the paleontologist.

Proc. internat. Zool. Congr., VII, Boston, 1907, 733-739.

——— 1912 I

A means of estimating the age of the mastodon and other Proboscidea.

Proc. internat. Zool. Congr., VII, Boston, 1907, 782-784, figs. 1-3.

——— 1912 J

Crania of *Tyrannosaurus* and *Allosaurus*.

Mem. Amer. Mus. Nat. Hist. (n.s.), I, 1-30, pls. i-iv, 27 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, 335; Geol. Centralbl., XIX, 445; Sci. Progress, VIII, 14; Rev. crit. Paléozool., XVII, 130; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 210; Nature, XC, 313.

——— 1912 K

Integment of the iguanodont dinosaur *Trachodon*.

Mem. Amer. Mus. Nat. Hist. (n.s.), I, 33-54, pls. v-x, 13 text-figs.

For abstracts see Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 334-335; Geol. Centralbl., XIX, 445-446.

——— 1912 L

The continuous origin of certain unit characters as observed by a paleontologist.

Harvey Lect., ser. 1911-1912, 153-204, 8 figs.

Review in Geol. Mag. (6), I, 125-126.

——— 1913 A

Tyrannosaurus, restoration and model of the skeleton.

Bull. Amer. Mus. Nat. Hist., XXXII, 91-92, pls. iv-vi.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 468; Rev. crit. Paléozool., XXI, 47; Geol. Zentralbl., XXI, 265.

Osborn, H. F.—Continued 1913 B

Eomoropus, an American Eocene chalicothere.

Bull. Amer. Mus. Nat. Hist., XXXII, 261-274, 11 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 140; Rev. crit. Paléozool., XIX, 1; XXI, 48; Geol. Zentralbl., XXI, 238; Nature, XCIII, 333.

——— 1913 C

Lower Eocene titanotheres. Genera *Lambdotherium, Eotitanops*.

Bull. Amer. Mus. Nat. Hist., XXXII, 407-415, 9 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 140; Sci. Progress, VIII, 635; Rev. crit. Paléozool., XIX, 6, 101; XXI, 50; Geol. Zentralbl., XXI, 234.

——— 1913 D

The skull of *Bathyopsis*, Wind River uintathere.

Bull. Amer. Mus. Nat. Hist., XXXII, 417-420, pls. lxiv-lxvi, 4 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 141; Sci. Progress, VIII, 635; Rev. crit. Paléozool., XIX, 1, 101; XXI, 50; Geol. Zentralbl., XXI, 266; Nature, XCII, 514.

——— 1914 A

Close of the Cretaceous and opening of Eocene time in North America.

Bull. Geol. Soc. Amer., XXV, 321-323.

——— 1914 B

Recent results in the phylogeny of the titanotheres.

Bull. Geol. Soc. Amer., XXV, 403-405, 1 text-fig.

A brief abstract is found on page 137 of the same volume. Abstract in Neues Jahrb. Min. Geol. Pal., 1919, Ref., 217-218.

——— 1914 C

New methods of restoring *Eotitanops* and *Brontotherium*.

Bull Geol. Soc. Amer., XXV, 406, 1 text-fig.

——— 1914 D

Restoration of the world series of elephants and mastodons.

Bull. Geol. Soc. Amer., XXV, 407-410, 2 text-figs.

——— 1914 E

Rectigradations and allometrons in relation to the conceptions of the "mutations of Waagen," of species, genera, and phyla.

Bull. Geol. Soc. Amer., XXV, 411-416, 3 tables.

Osborn, H. F.—Continued 1915 A

Close of Jurassic and opening of Cretaceous time in North America.

Bull. Geol. Soc. Amer., XXVI, 295-302, 1 text-fig.

—— 1915 B

Origin of single characters as observed in fossil and living animals and plants.

Amer. Naturalist, XLIX, 193-240, 10 text-figs.

Abstracts in Nature, XCV, 550-551; Rev. crit. Paléozool., XXI, 1.

—— 1915 C

Review of the Pleistocene of Europe, Asia, and Africa.

Ann. N. Y. Acad. Sci., XXVI, 215-315.

—— 1915 D

The origin of new adaptive characters.

Nature, XCVI, 284-285.

Followed by a response on the part of the reviewer.

—— 1915 E

The dinosaurs of the Bone Cabin quarry.

Amer. Mus. Nat. Hist. Handbook No. 5, 131-152, with figures.

—— 1916 A

Two new Oligocene titanotheres.

Bull. Amer. Mus. Nat. Hist., XXXV, 721-723, 2 text-figs.

—— 1916 B

Men of the Old Stone age; their environment, life and art. Illustrations by Upper Palæolithic artists and Charles R. Knight, Erwin S. Christman, and others.

Second edition. 8vo., i-xxvii+1-545 pages, 8 plates, 268 text-figs.

Pages 513-532 are the bibliography.

Reviews in L'Anthrop. Paris, XXVIII, 1917, 427-430; Nature, XCVIII, 45.

—— 1916 C

Additional characters of *Tyrannosaurus* and *Ornithomimus* (Abstract).

Bull. Geol. Soc. Amer., XXVII, 150-151.

—— 1916 D

Pelvis and sacrum of *Camarasaurus* (Abstract).

Bull. Geol. Soc. Amer., XXVII, 151.

—— 1916 E

The origin and evolution of life upon the earth.

Scient. Monthly, III, 5-22, 170-190, 289-307, 313-334, 502-513, 601-614, with 25 figs.

Pages 189, 190, 306, 307, 333, 334 are the bibliography.

Osborn, H. F.—Continued 1917 A

Skeletal adaptations of *Ornitholestes, Struthiomimus, Tyrannosaurus.*

Bull. Amer. Mus. Nat. Hist., XXXV, 733-771, pls. xxiv-xxvii, 23 text-figs.

Abstracts in Bull. Geol. Soc. Amer., XXVIII, 215; Rev. crit. Paléozool., XXIV, 145; Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 255-256; Geol. Zentralbl., XXVIII, 507; Sci. Progress, XII, 422.

—— 1917 B

The origin and evolution of life. On the theory of action, reaction and interaction of energy.

8vo., i-xxxi+1-322 pages, 136 illustrations.

Published in part in Scient. Monthly, III, 1916, 5-22, 170-190, 289-307, 313-334, 502-513, 601-614; abstract in Amer. Jour. Sci. (4), XLV, 77.

Reviewed in Amer. Mus. Jour., XVIII, 193-199; Science, XLVII, 472-474; Jour. Geol., XXVI, 283-285; Nature, CIII, 201.

—— 1917 C

The "ostrich" dinosaur and the "tyrant" dinosaur.

Amer. Mus. Jour., XVII, 5-13, 10 illustrations.

Note on in Nature, XCIX, 213.

—— 1917 D

Heritage and habitus.

Science (n.s.), XLIV, 660-661.

Abstract in Rev. crit. Paléozool., XXII, 109.

—— 1918 A

Equidæ of the Oligocene, Miocene, and Pliocene of North America; iconographic type revision.

Mem. Amer. Mus. Nat. Hist. (n.s.), II, 1-330, pls. i-xliv, 173 text-figs.

Reviewed in Science (n.s.), XLVIII, 171; Rev. crit. Paléozool., XXII, 55-57; Amer. Jour. Sci. (4), XLVI, 770-771; Nat. Hist., XIX, 733; Geol. Mag. (6), V, 518-519; ibid., LVII, 1920, 128-130.

Abstract in Geol. Zentralbl., XXVII, 184; Sci. Progress, XIV, 241.

—— 1918 B

Observations on the skeletons of *Moropus cooki* in the American Museum.

Bull. Geol. Soc. Amer., XXIX, 131-132.

Abstract in Rev. Géol. et Sci. conn., IV, 1923, 113.

Review in Rev. crit. Paléozool., XXVII, 31.

—— 1918 C

A long-jawed mastodon skeleton from South Dakota and phylogeny of the Proboscidea.

Bull. Geol. Soc. Amer., XXIX, 133-137, with a phylogenetic table.

Abstract in Rev. Géol. et Sci. conn., IV. 1923, 114.

Osborn, H. F.—Continued 1918 D
Samuel Wendell Williston.
Jour. Geol., XXVI, 673-689.

——— 1919 A
Memorial of Samuel Wendell Williston.
Bull. Geol. Soc. Amer., XXX, 66-76, portrait.

——— 1919 B
New titanotheres of the Huerfano.
Bull. Amer. Mus. Nat. Hist., XLI, 557-569, 7 figs.
Abstract in Rev. Géol. et Sci. conn., 1923, 111.
Review in Rev. crit. Paléozool., XXVII, 29.

——— 1919 C
Seventeen skeletons of *Moropus;* probable habits of this animal.
Proc. Nat. Acad. Sci., V, 250-252, 1 fig.
Abstract in Rev. Géol. et Sci. conn., IV, 1923, 114; nature, CVI, 252.
Review in Rev. crit. Paléozool., XXVII, 32.

——— 1919 D
Palæomastodon, the ancestor of the long-jawed mastodons only.
Proc. Nat. Acad. Sci., V, 265-266, with 1 fig.
Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 115; Nature, CVI, 252.

——— 1920 A
The hall of the age of man in the American Museum.
Nat. Hist., XX, 228-246, with 14 illustrations.

——— 1921 A
The evolution, phylogeny, and classification of the Proboscidea.
Amer. Mus. Novit., I, 1-15, 15 illustrations.
Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 112; Sci. Progress, XVI, 214.
Review in Rev. crit. Paléozool., XXVII, 29.

——— 1921 B
First appearance of the true mastodon in America.
Amer. Mus. Novit., X, 1-6, 2 figs.
Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 117; Sci. Progress, XVI, 214.
Review in Rev. crit. Paléozool., XXVII, 34.

——— 1921 C
The first appearance of the true mastodon in America.
Science (n.s.), LIV, 108.
Abstract in Rev. Géol. et Sci. conn., IV, 1923, 115-116.

Osborn, H. F.—Continued 1921 D
Resemblances and contrasts between zoologic and palæontologic research in mammalogy. Desirability of uniform standards and systems in classification, in description, in measurement, in reasoning.
Jour. Mamm., II, 1-11, with figs. 1, 2.

——— 1921 E
Adaptive radiation and classification of the Proboscidea.
Proc. Nat. Acad. Sci., VII, 231-234, 1 diagram.
Review in Rev. crit. Paléozool., XXVII, 79.

——— 1922 A
Hesperopithecus, the first anthropoid primate found in America.
Amer. Mus. Novit., XXXVII, 1-5, 3 figs.
Abstracts in Rev. Géol. et Sci. conn., V, 110; Rev. crit. Paléozool., XXVIII, 5, 1924; Geol Zentralbl., XXIX, 125.

——— 1922 B
Species of American Pleistocene mammoths. *Elephas jeffersonii*, new species.
Amer. Mus. Novit., No. 41, 1-16, 12 figs.
Abstracts in Geol. Zentralbl., XXVIII, 375; Neues Jahrb. Min. Geol. Pal., 1923, I, 325.

——— 1922 C
Hesperopithecus, the first anthropoid primate found in America.
Science (n.s.), LV, 463-465.
The same as Osborn, H. F., 1922 A, but without figures. Abstract in Amer. Jour. Sci. (4), III, 478.
Review in Rev. crit. Paléozool., XXVIII, 5.

——— 1922 D
Proving Asia the mother of the continents.
Asia, XXII, 721-724, 5 figs.

——— 1922 E
Hesperopithecus, the anthropoid primate of western Nebraska.
Nature, CX, 281-283, 2 figs.

——— 1922 F
Dibelodon edensis (Frick) of Southern California, *Miomastodon* of the Middle Miocene, new genus.
Amer. Mus. Novit., XLIX, 1-4, 1 fig.
Abstract in Rev. crit. Paléozool., XXVII, 216.

——— 1922 G
Migrations and affinities of the fossil proboscideans of North and South America and Africa.
Amer. Naturalist, LVI, 448-455.

Osborn, H. F.—Continued 1922 H

Pliocene (Tertiary) and early Pleistocene (Quaternary) Mammalia of East Anglia, Great Britain, in relation to the appearance of man.

Geol. Mag., LIX, 433-441.

Contains lists of fossil vertebrates by A. C. Savin.

Abstract in Rev. crit. Paléozool., XXVII, 219.

—— 1923 A

Mastodons of the Hudson Highlands.

Nat. Hist., XXIII, 3-24, with numerous illustrations.

—— 1923 B

Titanotheres and lophiodonts in Mongolia.

Amer. Mus. Novit., XCI, 1-5, 2 figs.

—— 1923 C

A new genus and species of Ceratopsia from New Mexico, *Pentaceratops sternbergii.*

Amer. Mus. Novit., XCIII, 1-3, 1 fig.

Abstracts in Rev. crit. Paléozool., XXVIII, 102, 1924; Geol. Zentralbl., XXX, 447.

—— 1923 D

Two Lower Cretaceous dinosaurs of Mongolia.

Amer. Mus. Novit., XCV, 1-10, 5 figs.

—— 1923 E

New subfamily generic and specific stages in the evolution of the Proboscidea.

Amer. Mus. Novit., XCIX, 1-4.

—— 1923 F

The extinct giant rhinoceros *Baluchitherium* of western and central Asia.

Nat. Hist., XXIII, 209-228, with illustrations.

—— 1923 G

Cadurcotherium from Mongolia.

Amer. Mus. Novit., XCII, 1-2.

—— 1924 A

Joseph Leidy, founder of vertebrate paleontology in America.

Science (n.s.), LIX, 173-176.

—— 1924 B

Psittacosaurus and *Protiguanodon:* Two Lower Cretaceous iguanodonts from Mongolia.

Amer. Mus. Novit., CXXVII, 1-16, 9 figs.

—— 1924 C

Three new Theropoda, *Protoceratops* zone, central Mongolia.

Amer. Mus. Novit., CXLIV, 1-12, figs. 1-8.

Osborn, H. F.—Continued 1924 D

Eudinoceras, Upper Eocene amblypod of Mongolia.

Amer. Mus. Novit., CXLV, 1-5, 2 figs.

—— 1924 E

Andrewsarchus, giant mesonychid of Mongolia.

Amer. Mus. Novit., CXLVI, 1-5, 3 figs.

—— 1924 F

Serridentinus and *Baluchitherium,* Loh formation, Mongolia.

Amer. Mus. Novit., CXLVIII, 1-5, 2 figs.

—— 1924 G

Parelephas in relation to phyla and genera of the family Elephantidæ.

Amer. Mus. Novit., CLII, 1-7, 2 figs.

—— 1924 H

Additional generic and specific stages in the evolution of the Proboscidea.

Amer. Mus. Novit., CLIV, 1-5, 2 figs.

—— 1924 I

Sauropoda and Theropoda of the Lower Cretaceous of Mongolia.

Amer. Mus. Novit., CXXVIII, 1-7, 7 figs.

—— 1924 J

Factors in the evolution and phylogeny of the Proboscidea.

Anat. Record, XXIX, 114.

—— 1924 K

Asiatic center of mammalian dispersion.

Pan-Amer. Geol., XLI, 271-275.

—— 1924 L

The discovery of an unknown continent.

Nat. Hist., XXIV, 133-149, 11 illustrations.

—— 1925 A

The elephants and mastodonts arrive in America.

Nat. Hist., XXV, 3-23, 18 figs.

—— 1925 B

Final conclusions on the evolution, phylogeny, and classification of the Proboscidea.

Proc. Amer. Philos. Soc., LXIV, 17-35, 3 figs.

—— 1925 C

The origin of species. II: Distinctions between rectigradations and allometrons.

Proc. Nat. Acad. Sci., XI, art. 12, 749-752.

Osborn, H. F.—Continued 1925 D
Mammals and birds of the California tar pools, Rancho La Brea and McKittrick.
Nat. Hist., xxv, 527-543, colored plate, 13 text-figs.
Reviewed in Science (n.s.), lxiv, 426.

—— 1925 E
Upper Eocene and Lower Oligocene titanotheres of Mongolia.
Amer. Mus. Novit., ccii, 1-12.

—— 1925 F
The origin of species as revealed by vertebrate palæontology.
Nature, cxv, 925-926, 961-963.

—— 1926 A
The origin of species. 1859-1925.
Scient. Monthly, xxii, 185-192.
Published in Yale Mus. Bull., vol. i, No. 1.

—— 1926 B
Additional new genera and species of the mastodontoid Proboscidea.
Amer. Mus. Novit., ccxxxviii, 1-16, 12 figs.
The bibliography includes 9 titles.

—— 1926 C
The problem of the origin of species as it appeared to Darwin in 1859 and as it appears to us today.
Science (n.s.), lxiv, 337-341.

—— 1927 A
Recent discoveries relating to the origin and antiquity of man.
Science (n.s.), lxv, 481-488.

——, and H. E. **Anthony** 1922 A
Close of the age of the mammals.
Jour. Mamm., iii, 219-237, 6 figs. Followed by a discussion by prominent mammalogists.
The bibliography presents 15 titles.

——, and Walter **Granger** 1901 A
Fore and hind limbs of *Sauropoda* from the Bone Cabin quarry.
Bull. Amer. Mus. Nat. Hist., xiv, 199-208, 6 figs.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1903, i, Ref., 157-158; Geol. Centralbl., ii, 763; Rev. crit. Paléozool., vii, 14.

——, and W. D. **Matthew** 1909 A
Geological correlation through vertebrate palæontology by international co-operation.
Ann. N. Y. Acad. Sci., xix, 41-44.

Osborn, H. F., and C. C. **Mook** 1917 A
Skeleton and restoration of *Camarasaurus*.
Bull. Geol. Soc. Amer., xxviii, 215 (Abstract).

—— —— 1919 A
Characters and restoration of the sauropod genus *Camarasaurus* Cope.
Proc. Amer. Philos. Soc., lviii, 386-396, pl. i, 3 text-figs.
Abstract in Rev. Géol. et Sci. conn., iv, 1923, 110-111; Nature, cvi, 252.
Review in Rev. crit. Paléozool., xxvii, 28.

—— —— 1920 A
Reconstruction of the skeleton of the sauropod dinosaur *Camarasaurus* Cope (*Morosaurus* Marsh).
Proc. Nat. Acad. Sci., vi, 15.
Abstract in Geol. Zentralbl., xxv, 540.

—— —— 1921 A
Camarasaurus, *Amphicœlias*, and other sauropods of Cope.
Mem. Amer. Mus. Nat. Hist. (n.s.), iii, 247-287, pls. lx-lxxxv, 127 text-figs.
There is a bibliography of 28 titles.
Review in Rev. crit. Paléozool., xxvii, 151.

Osburn, Raymond C. 1903 A
Adaptation to aquatic, arboreal, fossorial and cursorial habits in mammals.
Amer. Naturalist, xxxvii, 651-665.
Notice in Neues Jahrb. Min. Geol. Pal., 1906, i, Ref., 134-136.

—— 1906 A
Adaptive modifications of the limb skeleton in aquatic reptiles and mammals.
Ann. N. Y. Acad. Sci., xvi, 447-482, pls. vii-ix.

—— 1906 B
The function of the fins of fishes.
Science (n.s.), xxiii, 585-587.
See also Bull. N. Y. Zool. Soc. No. 25, 347-348.

—— 1907 A
The origin of vertebrate limbs. Recent evidence upon this problem from studies on primitive sharks.
Ann. N. Y. Acad. Sci., xvii, 415-436.

—— 1907 B
Observations on the origin of the paired limbs of vertebrates.
Amer. Jour. Anat., vii, 171-194, pls. i-v.
Abstract in Jahresber. Anat. Entwickl. (N.F.), xiii, pt. 3, 117-119.

Osgood, W. H. 1900 A
Revision of the pocket mice of the genus *Perognathus*.
N. A. Fauna, No. XVIII, 1-72, pls. i-iv, 15 text-figs.
Reviewed in Science (n.s.), XXX, 119.

—— 1905 A
Scaphoceros tyrrelli, an extinct ruminant from the Klondike gravels.
Smithson. Misc. Coll., XLVIII, 173-183, pls. xxv-xlii.
Abstract in Rev. crit. Paléozool., 13, 74.

—— 1905 B
Mastodon remains in the Yukon Valley.
Proc. Biol. Soc. Wash., XVIII, 254-255.

—— 1905 C
An extinct ruminant related to the musk-ox.
Science (n.s.), XXI, 788.

—— 1905 D
Symbos, a substitute for *Scaphoceros*.
Proc. Biol. Soc. Wash., XVIII, 223-224.

—— 1907 A
A specimen of *Bison occidentalis* from northwest Canada.
Proc. Biol. Soc. Wash., XX, 65.

—— 1909 A
Revision of the mice of the American genus *Peromyscus*.
N. A. Fauna, No. XXVIII, 1-285, pls. i-viii, 12 text-figs.
Reviewed in Science (n.s.), XXX, 119-121; Amer. Naturalist, XLIII, 633-639.

—— 1913 A
The name of the Rocky Mountain sheep.
Proc. Biol. Soc. Wash., XXVI, 57-62.

Osmont, Vance C. 1904 A
A geological section of the coast ranges north of the Bay of San Francisco.
Bull. Dept. Geol. Univ. Calif., LV, 39-87, pls. vi, vii.

Oswald, Ferdinand 1851 A
Ueber einen Fund von siebenzehn Zähnen des *Ptychodus latissimus* in einer Plänerkalkgrube bei Teplitz.
Zeitschr. deutsch. Geol. Ges., III, 531-535.

Oswald, Felix 1909 A
The degeneration of armour in animals.
Sci. Progress, 122-134, 23 illustrations.
Brief extract in Nature, LXXXI, 167.

—— 1911 A
The sudden origin of new types.
Sci. Progress, V, 396-430, 20 text-figs.

Otto, Hans 1908 A
Die Beschuppung der Brevilinguier und Ascalaboten.
Jena. Zeitschr. Naturwiss., XLIV (XXXVII), 193-252, pl. ix, 28 text-figs.
Appended is a bibliography of 27 titles.

Owen, D. D. 1856 A
Letter to Joseph Leidy regarding bones of *Megalonyx* found at Henderson, Ky.
Rep. Geol. Surv. Kentucky, I, 23.

—— 1857 B
Mammoth bones, etc., at Eminence, Henry County [Kentucky].
Rep. Geol. Surv. Kentucky, III, 100.

Owen, Luella A. 1926 A
Later studies on the loess.
Pan-Amer. Geol., XLV, 377-382.

Owen, R. 1839 E
A description of Viscount Cole's specimen of *Plesiosaurus macrocephalus*.
Ann. Nat. Hist., II, 64-68.

—— 1839 F
Description d'une dent et d'une portion de squelette du *Glyptodon*, grand quadrupède de l'ordre des édentés, auquel appartient l'armure osseuse tesselée figurée par M. Clift dan son mémoire sur les restes du mégathérium.
Ann. Sci. nat. (2), XII, 156-164.
Reprinted from Proc. Geol. Soc. Lond. 27, Feb. 1839.

—— 1839 G
Recherches sur la structure et la formation des dents des squaloïdes, et application des faits observés à une nouvelle théorie du développement des dents.
Ann. Sci. Nat. (2), XII, 209-220, pl. ix.
Reprinted in Froriep's Neue Notizen, XVII, 1841, 84-87, figs. See also C. R. Acad. Paris, Dec. 16, 1839; Froriep's Notizen, XIII, 81-85.

—— 1839 H
Sur la structure microscopique et le développement des dents des poissons gymnodontes.
Ann. Sci. Nat. (2), XII, 347-352.

—— 1840 H
Sur la structure intime et le développement des dents poissons gymnodontes.
C. R. Acad. Sci. Paris, X. 74-78.

Owen, R.—Continued 1840 I

A description of some of the soft part, with the integument of the hind-fin, of the *Ichthyosaurus*, indicating the shape of the fin when recent.

Proc. Geol. Soc. Lond., III, 157-158.

See also Froriep's Notizen, XVI, 1849, cols. 199-200.

——— 1841 G

Outlines of a classification of the Marsupialia.

Trans. Zool. Soc. Lond., II, 315-333.

——— 1841 H

On the osteology of the Marsupialia.

Trans. Zool. Soc. Lond., II, 379-408, pls. lxviii-lxxi.

——— 1842 F

On British fossil reptiles.

Edinb. New Philos. Jour., XXXIII, 65-88.

Reprinted from the report of the Plymouth meeting, Brit. Assoc. Adv. Sci., 1841, 191.

——— 1842 G

Notes on the anatomy of the Nubian giraffe.

Trans. Zool. Soc. Lond., II, 217-248, pls. xl-xliv.

Osseous system on pages 234-239.

——— 1843 C

Zoological summary of the extinct and living animals of the order Edentata.

Edinb. New Philos. Jour., XXXV, 353-361.

——— 1843 D

Description of the fossil tympanic bones referable to four distinct species of *Balæna*.

Proc. Geol. Soc. Lond., IV, 283-286, 1 fig.

——— 1844 B

Description of a fossil molar tooth of a mastodon discovered by Count Strzlecki in Australia.

Ann. Mag. Nat. Hist. (1), XIV, 268-271.

Describes *Mastodon australis*, on a specimen now believed to have been found in South America or Mexico.

——— 1844 C

Characters of a new species of axolotl.

Ann. Mag. Nat. Hist. (1), XIV, 23, 1 fig.

——— 1845 D

Abstracts in Edinb. New Philos. Jour., XXXIX, 334-339; Quart. Jour. Geol. Soc., I, 318-322.

——— 1845 E

Sur la classification et les analogies des dents molaires des carnivores.

Ann. Sci. Nat. (3), III, 116-128.

Owen, R.—Continued 1845 F

Appendix to Professor Henslow's paper, consisting of a description of the fossil tympanic bones referable to 4 distinct species of *Balæna*.

Geol. Mag., I, 37-40, 1 fig.

——— 1846 E

Lectures on the comparative anatomy and physiology of the vertebrate animals. Pt. I: Fishes.

8vo., i-xi+1-304 pages, 81 figs.

The bibliography presents 138 titles.

——— 1848 B

The archetype and homologies of the vertebrate skeleton.

8vo., London, i-viii+1-203 pages, 2 pls., 3 tables, and 28 text-figs.

A reprint of Owen, R., 1847 B, with additional facts and illustrations.

——— 1849 D

On the structure of the teeth of some fossil fish of the Carboniferous period.

Ann. Mag. Nat. Hist. (2), III, 41-42.

——— 1851 C

For title and citation see Hay, O. P., 1902 A, p. 188. Abstracts in Lond. Edinb. Dublin Philos. Mag. (4), I, 250-253; Froriep's Tagsber., II, 97-101.

——— 1851 D

Comparison of the modifications of the osseus structure of the *Megatherium*, with that in other known existing and extinct species of the class Mammalia.

Edinb. New Philos. Mag., LI, 350-357.

Translation in Froriep's Tagsber., II, 225-230.

——— 1855 D

Note on some remains of an *Ichthyosaurus* discovered by Captain Sir Edward Belcher, C. B. R. N., at Exmouth Island in lat. 77° 16′ N., long. 96° W.

In Belcher's The last of the Arctic voyages, II, 389-391, pl. xxxi, map.

——— 1855 E

On the anthropoid apes and their relations to man.

Proc. Roy. Instn. G. Brit., II, 26-41.

——— 1857 E

On the characters, principles of division, and primary groups of the class Mammalia.

Jour. Linn. Soc. Lond., II, 1-37, 6 text-figs.

Owen, R.—Continued 1857 F

On the affinities of the *Stereognathus ooliticus* (Charlesworth), a mammal from the Oolitic slate of Stonesfield.

Quart. Jour. Geol. Soc., XIII, 1-11. Also in Arch. Sci. Phys. Nat., XXXV, 191-205.

—— 1857 G

On the fossil vertebra of a serpent (*Laophis crotaloides*, Ow.) discovered by Capt. Spratt, R. N., in a Tertiary formation in Salonica.

Quart. Jour. Geol. Soc., XIII, 196-199, pl. iv.

—— 1858 A

On the characters, principles of division and primary groups of the class Mammalia.

Proc. Linn. Soc. Lond., Zool., II, 1-37, 6 text-figs.

—— 1859 E

On the vertebral column of the order Pterosauria (Ow.) as exemplified in the genera *Pterodactylus* (Cuv.) and *Dimorphodon* (Ow.).

Proc. Roy. Soc. Lond., IX, 703-704 (Abstract).

—— 1859 F

On some reptilian remains from South Africa.

Edinb. New Philos. Jour., X, 289-291.

—— 1860 A

On the orders of fossil Reptilia and their distribution in time.

Rep. Brit. Assoc. Adv. Sci., XXIX, Aberdeen, 1859, 153-166.

—— 1861 A

A monograph of a fossil dinosaur (*Scelidosaurus harrisonii* Owen) of the Lower Lias.

Palaeont. Soc. Mon. Brit. Foss. Reptilia of the Liassic formation. Pt. I, 1-14, pls. i-vi.

—— 1862 B

On the cervical and lumbar vertebrae of the mole (*Talpa europæa*).

Rep. Brit. Assoc. Adv. Sci., 1861 (1862), 152-154.

—— 1863 B

A monograph of a fossil dinosaur (*Scelidosaurus harrisonii* Owen) of the Lower Lias.

Palaeont. Soc. Mon.-Brit. Foss. Reptilia of the Liassic formation. Pt. II, 1-26, pls. I-xi.

Owen, R.—Continued 1869 B

On the distinction between *Castor* and *Trogontherium*.

Geol. Mag., VI, 49-56, pl. iii, 4 text-figs.

—— 1869 C

Description of a great part of a jaw with the teeth of *Strophodus medius*, Ow., from the Oolite of Caen, in Normandy.

Geol. Mag., VI, 193-196; 235-236, pl. vii, and a text-fig.

Abstract in Neues Jahrb. Min. Geol. Pal., 1870, 1035.

—— 1869 D

On some Indian Cetacea collected by Walter Elliott, Esq.

Trans. Zool. Soc. Lond., VI, 17-47, pls. iii-xiv.

—— 1869 E

Description of the cavern of Bruniquel, and its organic contents.

Phil. Trans. Roy. Soc. Lond., CLIX, pt. 1, 517-557, pls. lvii-lx, 9 text-figs.

—— 1869 F

On the remains of a large extinct lama (*Palauchenia magna*, Ow.), from Quaternary deposits in the valley of Mexico.

Proc. Roy. Soc. Lond., XVII, 405-406.

—— 1870 D

Monograph on the British fossil Cetacea of the Red Crag.

Palaeont. Soc. Mon., pp. 1-40, pls. i-iv, 14 text-figs.

Same as Owen, R., 1889 A, wrongly dated.

—— 1873 B

Discussion on *Hypsilophodon foxii*.

Quart. Jour. Geol. Soc., XXIX, 531-532.

—— 1876 D

Descriptive and illustrated catalogue of the fossil Reptilia of South Africa in the collection of the British Museum.

4to. London, i-xii+1-88 pages, pls. i-lxx.

—— 1876 E

On the new modification of dinosaurian vertebræ.

Quart. Jour. Geol. Soc., XXXII, 43-46, pls. iv, v.

—— 1878 E

On *Argillornis longipennis* Ow., a large bird of flight from the Eocene clay of Sheppey.

Quart. Jour. Geol. Soc., XXXIV, 124-130, pl. vi.

Owen, R.—Continued 1879 C
On *Hypsiprimnodon* Ramsay, a genus indicative of a distinct family (Pleopodidæ) in the diprotodont section of the Marsupialia.
Trans. Linn. Soc. Lond. (2), I, 573-582, pls. lxxi, lxxii, 3 text-figs.

—— 1879 D
On the association of dwarf crocodiles (*Nannosuchus* and *Theriosuchus pusillus*, e. g.) with diminutive mammals of the Purbeck shales.
Quart. Jour. Geol. Soc., XXXV, 148-155, pl. ix.

—— 1880 B
On the skull of *Argillornis longipennis* Ow.
Quart. Jour. Geol. Soc., XXXVI, 23-26, pl. ii.

—— 1883 A
See Hay, O. P., 1902 A, p. 192.
Abstract in Ann. Mag. Nat. Hist. (5), II, 372.

—— 1885 A
Note on the resemblance of the upper teeth of an Eocene mammal (*Neoplagiaulax* Lemoine) to those of *Tritylodon*.
Quart. Jour. Geol. Soc., XLI, 28-29, figs. 1-3.
See also Geol. Mag. (3), II, 43-44.

—— 1885 B
Note on remains of *Elephas primigenius* from one of the Creswell bone-caves.
Quart. Jour. Geol. Soc., XLI, 31-33, 2 figs.

Owen, Richard (of America) 1862 A
Report of a geological reconnaissance of Indiana, 1859-1860.

Pabst, Wilhelm 1896 A
Thierfährten aus dem Oberrothliegenden von Tambach in Thüringen.
Zeitschr. deutsch. Geol. Ges., XLVIII, 638-643, pl. xiv.

—— 1900 A
Beiträge zur Kenntnis der Tierfährten in dem Rothliegenden "Deutschlands."
Zeitschr. deutsch. Geol. Ges., LII, 48-63.
Abstract in Geol. Centralbl., I, 155, 1901.

—— 1905 A
Beiträge zur Kenntnis der Tierfährten in dem Rotliegenden "Deutschlands."
Zeitschr. deutsch. Geol. Ges., LVII, 1-14, 361-379, pls. i-iv, xv-xviii.

Pabst, Wilhelm—Continued 1908 A
Beiträge zur Kenntnis der Tierfährten in dem Rotliegenden "Deutschlands."
Zeitschr. deutsch. Geol. Ges., LX, 325-345.
Abstract in Neues Jahrb. Min. Geol. Pal., 1910, I, 468.

Packard, A. S. 1868 B
Ice-marks and ancient glaciers in the White Mountains.
Amer. Naturalist, I, 260-269.

—— 1904 A
The two chief faunæ of the earth.
Science (n.s.), XIX, 220-221.

Packard, E. L. See **Smith** and **Packard.** 1919 A

Paget, Geoffrey W., and Robert E. **Savage** 1916 A
The growth rings on herring scales.
Proc. Roy. Soc. Lond., LXXXIX, 258-260.

Palacký, J. 1894 A
Über neue Resultäte der Verbreitung der Reptilien.
Verh. Ges. deutsch. Naturf., 1893, II, Pt. I, 129-133.

—— 1898 A
La distribution des ophidiens sur le globe.
Mém. Soc. zool. France, XI, 88-125.

—— 1898 B
Die Verbreitung der Batrachier auf der Erde.
Verh. zool.-bot. Ges. Wien, XLVIII, 374-382.

—— 1899 A
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Über die Verbreitung der Salamandriden.
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—— 1899 C
Die Verbreitung der Eidechsen.
Zool. Jahrb. Syst., XII, 247-285.

—— 1902 A
Zur Verbreitung der Edentaten.
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Verh. deutsch. Zool. Ges., XII, 1902, 137-152.

Palacký, J.—Continued 1902 C

Die Verbreitung der Meeressäugethiere.

Zool. Jahrb. Syst., xv, 249-266.

——— 1902 D

Die Verbreitung der Mikrochiropteren.

Sitz.-Ber. böhm. Ges. Wiss., 1901, No. xxiv, 1-23.

——— 1903 A

Die Verbreitung der Marsupialien.

Sitz.-Ber. böhm. Ges. Wiss., 1902, art. xviii, 1-7.

——— 1903 B

Die Verbreitung der Ungulaten.

Zool. Jahrb. Syst., xviii, 303-341.

Abstract in Geol. Centralbl., iii, 553.

——— 1903 C

Die Verbreitung der Insectivoren.

Zool. Jahrb. Syst., xviii, 342-350.

——— 1904 A

La distribution géographique des rongeurs sur le globe.

Prag., 1904. (Not seen.)

Pallas, P. S. 1780 A

Observatio de dentibus molaribus fossilibus ignoti animalis, canadensibus analogis, etiam ad Uralense jugam repertis.

Acta Acad. Sci. Petropol., 1777 (1780), i, pt. ii, 213-222, pls. viii, ix.

——— 1788 A

De ossibus mamonteis.

Nova Acta Acad. Sci. Petropol., ii, 259-264, pls. viii, ix.

Palmer, R. W. 1913 A

The brain-case of a fossil ungulate of the genus *Anoplotherium*.

Proc. Zool. Soc. Lond., 1913, 878-893, 8 text-figs.

The bibliography presents 9 titles.

Palmer, T. S. 1903 A

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——— 1904 A

Index generum Mammalium. A list of the genera and families of mammals.

N. A. Fauna, No. xxiii, 1-984.

Review in Rev. crit. Paléozool., ix, 171-173.

——— 1919 A

The discoverer [B. F. Mudge] of the toothed birds of Kansas.

Jour. Wash. Acad. Sci., ix, 657.

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Description of a new species of leatherback turtle from the Miocene of Maryland.

Proc. U. S. Nat. Mus., xxxvi, 369-373, pl. xxxi.

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Certain Miocene fossils.

Jour. Wash. Acad. Sci., v, 261-262.

Discusses remains of porpoises from Chesapeake Beach, Maryland; but no names were applied to these.

——— 1917 A

The fossil sea-cow of Maryland.

Jour. Wash. Acad. Sci., vii, 120.

——— 1920 A

Note on "*Phocæna occidua*" of Jordan and J. Z. Gilbert.

Jour. Mamm., i, 100.

Pan, Ismael del 1925 A

Restos fósiles de proboscideos existentes en el gabinete de historia natural del Instituto de Toledo.

Bol. Soc. espan. hist. nat., xxv, 345-352, 6 figs.

Pander, C. H., and E.d' Alton 1821 A-1838 A

Vergleichende Osteologie. Two volumes.

Oblong folio. Bonn.

Vol. i consists of 12 parts, or Lieferungen; vol. ii, of 2 parts. These were issued at times from 1821 to 1838. The captions, pages, plates, and dates of the parts here follow.

——— ——— 1821 A

Das Riesen-Faulthiere. *Bradypus giganteus*.

Vergleich. Osteol., i, Lief. 1, [ii]+1-13 pages, pls. i-vii.

——— ——— 1821 B

Die Skelete der Pachydermata.

Vergleich. Osteol., i, Lief. 2, [ii]+1-19 pages, pls. i-xii.

——— ——— 1822 A

Die Skelete der Raubthiere.

Vergleich. Osteol., i, Lief. 3, [ii]+1-10 pages, pls. i-viii.

——— ——— 1823 A

Die Skelete der Wiederkäuer.

Vergleich. Osteol., i, Lief. 4, [ii]+1-10 pages, pls. i-viii.

——— ——— 1823 B

Die Skelete der Nagethiere.

Vergleich. Osteol., i, Lief. 5, [i]+1-11 pages, pls. i-viii.

Pander, C. H., and E.d' **Alton**—Continued 1824 A
Die Skelete der Nagethiere.
II. Vergleich. Osteol., I, Lief. 6, [vi]+1-6 pages, pls. i-x.

—— —— 1824 B
Die Skelete der Vierhänder.
Vergleich. Osteol., I, Lief. 7, [ii]+1-11 pages, pls. i-viii.

—— —— 1825 A
Die Skelete der Zahnlosen Thiere.
Vergleich. Osteol., I, Lief. 8, [i]+1-13 pages, pls. i-viii.

—— —— 1826 A
Die Skelete der Robben und Lamantine.
Vergleich. Osteol., I, Lief. 9, [ii]+1-10 pages, pls. i-vii.

—— —— 1827 A
Die Skelete der Cetaceen.
Vergleich. Osteol., I, Lief. 11, [ii]+1-10 pages, pls. i-vi.

—— —— 1827 B
Die Skelete der straussartigen Vögel.
Vergleich. Osteol., II, Lief. 1, [ii]+1-18 pages, pls. i-vii.

—— —— 1828 A
Die Skelete der Beutelthiere.
Vergleich. Osteol., I, Lief. 2, [ii]+1-10 pages, pls. i-vii.

—— —— 1831 A
Die Skelete der Chiropteren und Insectivoren.
Vergleich. Osteol., I, Lief. 12, [ii]+1-30 pages, pls. i-vii.

—— —— 1838 A
Die Skelete der Raubvögel.
Vergleich. Osteol., II, Lief. 2, [ii]+1-24 pages, pls. i-vii.

Pappenheim, P. 1905 A
Zur biologischen Bedeutung der Säge bei den sogen. Sägefischen (*Pristiophorus* M. H. und *Pristis* Lath.)
Sitz.-Ber. Ges. naturf. Freunde Berlin, 1905, 97-102.

—— 1905 B
Altes und Neues von den Sägefischen.
Aus der Natur., I, 397-402, 6 figs.

Paramore, R. H. 1910 A
The evolution of the pelvic floor in the non-mammalian vertebrates and pronograde mammals.
Lancet, CLXXVIII, 1393-1399, 1459-1467, 19 figs.

Paret, T. Dunkin 1894 A
Letter on Hartman's cave, Stroudsburg, Pennsylvania. Written to H. C. Mercer.
Proc. Acad. Nat. Sci. Phila., 1894, 97.

Parish, Woodbine 1832 A
An account of the discovery of portions of three skeletons of the *Megatherium* in the province of Buenos Ayres in South America.
Phil. Mag. Jour. Sci., I, 233-234.
An abstract of paper read.

Parker, G. H. 1901 A
Correlated abnormalities in the scutes and bony plates of the carapace of the sculptured tortoise.
Amer. Naturalist, XXXV, 17-24, 5 text-figs.

—— 1904 A
The function of the lateral line organs of fishes.
Amer. Naturalist, XXXVIII, 496-497.

—— 1908 A
Special description of the auditory organ and other soft parts [of *Rhadinichthys deani*].
Iowa Geol. Surv., XVIII, 272, fig. 40.

Parker, John D. 1881 A
Memorial of Prof. Benjamin F. Mudge.
Trans. Kansas Acad. Sci., VII, 7-11.

Parker, T. Jeffery 1886 A
On the claspers of *Callorhynchus*.
Nature, XXXIV, 635.

——, and W. A. **Haswell** 1897 A
A text-book of zoology.
Two vols., 8vo., II, i-xx+1-683 pages, figs. 664-1172.

Parker, W. K. 1864 B
Remarks on the skeleton of the *Archæopteryx;* and on the relations of the bird to the reptile.
Geol. Mag., I, 55-57.

—— 1869 A
On the osteology of the kager (*Rhinochetus jubatus*).
Trans. Zool. Soc. Lond., VI, 501-521, pls. xci, xcii.

—— 1873 B
On the development of the face in the sturgeon (*Accipenser sturio*).
Month. Micr. Jour., IX, 254-257, pl. xx.

—— 1875 C
On the morphology of the skull in the woodpeckers (Picidæ) and wrynecks (Yungidæ).
Trans. Linn. Soc. Lond. (2), I, 1-22, pls. i-v.

Parker, W. K.—Continued 1875 D

On the structure and development of the bird's skull.

Trans. Linn. Soc. Lond. (2), I, 99-154, pls. xx-xxvii.

—— 1877 B

On the structure and development of the skull in the urodelous Amphibia.

Phil. Trans. Roy. Soc. Lond., CLXVII, 529-597, pls. xxi-xxix.

—— 1878 C

On the structure and development of the skull in the Lacertilia.

Proc. Roy. Soc. Lond., XXVIII, 214-218.

—— 1879 C

On the development of the skull and its nerves in the green turtle (*Chelone midas*), with remarks on the segmentation seen in the skull of various types.

Proc. Roy. Soc. Lond., XXVIII, 329-346.
Abstract in Nature, XIX, 1879, 593, figs. 1-3.

—— 1880 B

On the structure and development of the skull in the Batrachia.

Nature, XXII, 161-162.
Abstract in Parker, W. K., 1880 A.

—— 1881 B

On the structure of the skull in the chameleons.

Trans. Zool. Soc. London, XI, 77-105, pls. xv-xix.

—— 1881 C

On the structure and development of the skull in sturgeons.

Nature, XXIV, 71.
Abstract of Parker, W. K., 1882 B.

—— 1885 C

On the structure and development of the skull in the Mammalia. Pt. II: Edentata.

Phil. Trans. Roy. Soc. Lond., CLXXVI, 1-119, pls. i-xv.
An extensive bibliography occupies pages 2-6.

—— 1886 A

On the structure and development of the skull in the Mammalia. Pt. III: Insectivora.

Phil. Trans. Roy. Soc. Lond., CLXXVI, 121-275, pls. xvi-xxxix.
There is a bibliography of 23 titles.

—— 1887 B

On the morphology of birds.

Proc. Roy. Soc. Lond., XLII, 52-58.

Parker, W. K.—Continued 1888 A

On the presence of claws in the wings of the Ratitæ.

Ibis (5), VI, 124-128, 4 text-figs.

—— 1888 B

On the secondary carpals, metacarpals, and digital rays in the wings of existing carinate birds.

Proc. Roy. Soc. Lond., XLIII, 322-325.
Abstract in Nature, XXXVII, 334-335.

—— 1888 C

On remnants or vestiges of amphibian and reptilian structures found in the skull of birds, both Carinatæ and Ratitæ.

Proc. Roy. Soc. Lond., XLIII, 397-402.
Abstract in Nature, XXXVII, 501-502.

—— 1888 D

On the vertebral chain of birds.

Proc. Roy. Soc. Lond., XLIII, 465-482.

—— 1890 A

On the morphology of the duck and the auk tribes.

Roy. Irish Acad. Cunningh. Mem., VI, 1-104, pls. i-ix.

——, and G. T. **Bettany** 1877 A

The morphology of the skull.

8vo., London, i-xv+1-368 pages, 86 figs.
Reviewed in Morphol. Jahrb., V, 1879, 397-399.

Parks, William A. 1920 A

Preliminary description of a new species of trachodont dinosaur of the genus *Kritosaurus, Kritosaurus incurvimanus.*

Trans. Roy. Soc. Canada (3), XIII, 51-59, figures 1-13.

—— 1920 B

The osteology of the trachodont dinosaur *Kritosaurus incurvimanus.*

Stud. Univ. Toronto, Geol. ser. No. 11, 1-76, pls. i-vii, 22 text-figs.

—— 1922 A

A new genus and species of dinosaur from the Belly River beds of Alberta.

Science (n.s.), LVI, 174. (A brief abstract; no name.)

—— 1922 B

Parasaurolophus walkeri, a new genus and species of crested trachodont dinosaur.

Univ. Toronto Stud. Geol. ser. No. 13, 1-32, pls. i-ix, 9 text-figs.

Parks, William A.—Continued 1923 A
New species of crested trachodont dinosaur.
Bull. Geol. Soc. Amer., xxxiv, 130 (Abstract).

——— 1923 B
Corythosaurus intermedius, a new species of trachodont dinosaur.
Univ. Toronto Stud., Geol. ser. No. 15, 1-57, pls. i-vi, 13 text-figs.

——— 1924 A
A new antilocaprid from the postglacial of Saskatchewan.
Geol. Soc. Amer. Prelim. lists, 1924, 38.

——— 1924 B
A new genus and species of horned dinosaur from the Cretaceous of Alberta.
Geol. Soc. Amer. Prelim. lists, 1924, 38.

——— 1924 C
Dioplosaurus acutosquameus, a new genus and species of armoured dinosaur; and notes on a skeleton of *Prosaurolophus maximus*.
Univ. Toronto Stud. Geol. ser. No. 18, 1-35, pls. i-v.

——— 1925 A
New antilocaprid from the postglacial of Saskatchewan.
Bull. Geol. Soc. Amer., xxxvi, 225-226 (Abstract).

——— 1925 B
New genus and species of horned dinosaur from Alberta.
Bull. Geol. Soc. Amer., xxxvi, 226.

——— 1925 C
Buried Indian workshop with remains of an extinct mammal.
Bull. Geol. Soc. Amer., xxxvi, 429-434, pl. x.

——— 1925 D
Arrhinoceratops brachyops, a new genus and species of Ceratopsia from the Edmonton formation of Alberta.
Univ. Toronto Stud. Geol. ser. No. 19, 1-15, pls. i, ii.

——— 1928 A
Albertosaurus arctunguis, a new species of theropodous dinosaur from the Edmonton formation of Alberta.
Univ. Toronto Stud. Geol. ser. No. 25, 1-42, pl. i, 20 text-figs.

Parmenter, C. S. 1900 A
Fossil turtle from the Dakota epoch.
Trans. Kansas Acad. Sci., xvi, 67.
No name is applied to this cast of a turtle.

Parsons, F. G. 1901 A
On the muscles and joints of the giant golden mole (*Chrysochloris trevelyani.*)
Proc. Zool. Soc. Lond., 1901, i, 26-34, 1 text-fig.

——— 1903 A
On the meaning of some of the epiphyses of the pelvis.
Jour. Anat. Physiol. Lond., xxxvii, 315-323, 9 text-figs.

Pasquale, Maria 1905 A
Avanzi di *Diodon vetus* nel Miocene inferiore del promontorio di S. Elia presso Cagliari in Sardegna.
Rend. Accad. Sci., Napoli, xliv (ser. 3, xi), 71-79, 3 figs.
There is given a list of fossil species of *Diodon*, together with the literature of each.

Paterson, A. M. 1901 A
The sternum: Its early development and ossification in man and mammals.
Jour. Anat. Physiol. Lond., xxxv (n.s., xv), 21-32, pls. ii, iii.

——— 1902 A
Development of the sternum and shoulder girdle in mammals.
Brit. Med. Jour., 1902, ii, 777.

Patten, William 1894 A
On structures resembling dermal bones in *Limulus*.
Anat. Anz., ix, 429-438, 4 figs.

——— 1902 A
On the structure and classification of the Trematapidæ.
Amer. Naturalist, xxxvi, 379-393, 3 text-figs.
Abstract in Geol. Centralbl., ix, 663.

——— 1902 B
On the origin of vertebrates. With special reference to the structure of the ostracoderms.
Verh. internat. Zool.-Kongr., v, Berlin, 1901, 180-192, 6 text-figs.
Brief abstract in Neues Jahrb. Min. Geol. Pal., 1905, ii, Ref., 133-134.

——— 1903 A
On the appendages of *Trematapis*.
Amer. Naturalist, xxxvii, 223-242, 9 text-figs.
Abstract in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 159-160.

——— 1903 B
On the structure of the Pteraspidæ and Cephalaspidæ.
Amer. Naturalist, xxxvii, 827-865, pls. i, ii, 10 text-figs.
Abstract in Jahresber. Anat. Entwickl. (N.F.), x, Abth. 3, 160.

Patten, William—Continued 1903 C

The structure of the ostracoderms.

Science (n.s.), XVII, 488-489.

——— 1903 D

On the structure and classification of the Trematáspidæ.

Mem. Acad. Sci. St. Petersb. (8), XIII, 1-33, pls. i, ii.

The bibliography comprises 20 titles.

For brief note see Science (n.s.), XIX, 397.

——— 1904 A

New facts concerning *Bothriolepis*.

Biol. Bull., VII, 113-124, 6 text-figs.

Abstract in Geol. Centralbl., VIII, 379.

——— 1905 A

The structure of *Bothriolepis*.

Science (n.s.), XXI, 297.

——— 1905 B

Studies relating to the origin of the vertebrates.

Publ. Carnegie Instn. Wash. Year Book No. 3, 1904 (1905), 140.

——— 1906 A

Investigations relating to the origin of vertebrates.

Publ. Carnegie Instn. Wash. Year Book No. 4, 1905 (1906), 283-284.

——— 1912 A

The evolution of the vertebrates and their kin.

Philadelphia, 8vo., i-xxi+1-486 pages, 309 figs.

Reviewed in Amer. Jour. Sci. (4), XXXIII, 590-592; Science (n.s.), XXXVI, 120-122; Nature, XCI, 79.

——— 1912 B

On the origin of vertebrates.

For a critique of this paper by W. E. Ritter, see Amer. Naturalist, XLVI, 623-632.

——— 1925 A

The origin of vertebrates.

Science (n.s.), LXI, p. x, June 19.

——— 1926 A

New ostracoderms from Spitzbergen.

Bull. Geol. Soc. Amer., XXXVII, 237 (Abstract).

Pavlow, M. W. 1888 A

Abstract in Geol. Mag. (3), V, 572.

——— 1901 A

Nouvelles trouvailles de *Mastodon borsoni* Lart. au sud de la Russie.

Annuaire Géol. Min. Russie, V, livr. 2-3, 1-18, pl. 1.

Pavlow, M. W.—Continued 1903 A

Protohippus en Russie.

Bull. Soc. Natural. Moscou, XVII, 173-182, pl. iii.

Abstracts in Jahresh. Anat. Entwickl. (N.F.), X, Abth. 3, 182; Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 316; Rev. crit. Paléozool., VIII, 153-154; Geol. Centralbl., V, 725.

——— 1903 B

Études sur l'histoire paléontologique des ongulés. VIII: Sélenodontes tertiaires de la Russie.

Bull. Soc. Natural. Moscou (n.s.), XVII, 200-221, pls. vi, vii.

A list of works consulted embraces 46 titles.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 315-316; Geol. Centralbl., V, 723.

——— 1903 C

Mastodon angustidens Cuv. et *Mastodon longirostris* Kaup de Kertch.

Annuaire Géol. Min. Russie, VI, 128-139, pls. i, ii.

There is a bibliography of 29 titles.

The paper is printed in Russian and in French.

——— 1904 A

Procamelus du gouvernement de Kherson.

Mém Soc. Nat. nouv. Russ., XXV, pt. ii, 113-133, pl. i.

Abstracts in Geol. Zentralbl., V, 723; Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 316; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 190; X, pt. 3, 182; Geol. Zentralbl., VI, 664.

——— 1906 A

Résumé de la description des mammifères fossiles recueillis par l'expedition polaire du Baron E. Toll en 1900-1903.

Bull. Acad. Sci. St. Petersb. (5), XXIV, 199-203.

——— 1906 B

Études sur l'histoire paléontologiques des ongulés. IX: Sélenodontes posttertiaires de la Russie.

Mém. Acad. Sci. St. Pétersb. (8), XX, 1-95, pls. i-viii.

The works consulted and cited are 96 in number. Authors abstract in Ann. Géol. Min. Russie, IX, 145.

——— 1907 A

Revue de la littérature russe pour la paléontologie des mammifères. 1901-1906.

Annuaire Géol. Min. Russie, IX, 139-146.

Pavlow, M. W.—Continued 1908 A
Quelques carnivores fossiles du gouvernment de Kherson et de Bessarabie.
Mém. Soc. Nat. nouv. Russ., XXXII, 28-49, pls. i, ii.
Author's abstract in Annuaire Géol. Min. Russie, XI, 1909, 163.

—— 1909 A
Les éléphants posttertiaires de diverses localités en Russie.
Annuaire Géol. Min. Russie, XI, 167-174, pl. v.
In Russian and French.

—— 1910 A
Les éléphants fossiles de la Russie.
Nouv. Mém. Soc. Nat. Moscou, XVII (XXII), liv. 2, 1-60, pls. i-iii.
For review see Geol. Mag. (5), IX, 38-39. Abstract in Geol. Centralbl., XVI, 492; XX, 67; Nature, LXXXVII, 229.

—— 1913 A
Mammifères tertiaires de la Nouvelle Russie. Avec un article géologique du Prof. A. P. Pavlow. 1-re Partie. Artiodactyla, Perissodactyla (*Aceratherium kowalevskii* n. s.).
Nouv. Mém. Soc. Nat. Moscou, XVII (XXII), liv. 3, 1-68, pls. i-iv.

—— 1915 A
Mammifères tertiaires de la Nouvelle Russie. Avec un article géologique du Prof. A. P. Pavlow. 2-e Partie. *Aceratherium incisivum,* Hipparion, Proboscidea, Carnivora.
Nouv. Mém. Soc. Nat. Moscou, XVII (XXII), liv. 4, 1-78, pls. v-vii.

—— 1925 A
Nouvelles données scientifiques sur la position de l'*Hipparion.*
Bull. Soc. Natural. Moscou, 1824 or 1825, 313-328, 5 figs.

Peabody, Charles 1908 A
The exploration of Bushey Cavern, near Cavetown, Maryland.
Bull. Phillips Acad., IV, 5-12, map, 8 pls.

—— 1913 A
A summary of the archæology of Trenton, New Jersey, U. S. A.
Internat. Congr. Americanists, XVIII, London, 1912, pt. i, 3-4.

Peale, A. C. 1876 A
Report of A. C. Peale, Geologist of Middle Division.
Rep. U. S. Geol. Surv. Terrs. (Hayden) for 1874, 73-180, plates and maps.

Peale, A. C.—Continued 1912 A
On the stratigraphic position and age of the Judith River formation.
Jour. Geol., XX, 530-549, 640-652, 738-757.
Abstract in Geol. Centralbl., XIX, 264-266.

—— 1913 A
The laws of nomenclature in paleontology.
Science (n.s.), XXXVII, 979-980.

Peale, R. 1831 A
Narrative of the discovery and exhumation of the skeleton of the mastodon.
In Goddard's "American Natural History," II, 211-224.

Pearson, Helga S. 1921 A
The skull and some related structures of a late embryo of *Lygosoma.*
Jour. Anat. Lond., LVI, 20-44, 7 figs.

—— 1923 A
Some skulls of *Perchœrus* (*Thinohyus*) from the White River and John Day formations.
Bull. Amer. Mus. Nat. Hist., XLVIII, 61-96, 17 figs.
Abstract in Geol. Zentralbl., XXX, 252.

—— 1924 A
The skull of the dicynodont reptile, *Kannemeyeria.*
Proc. Zool. Soc. Lond., 1924, 793-826, figs. 1-18.
There is a bibliography of 16 titles.
Abstract in Neues Jahrb. Min. Geol. Pal., 1926, 84.

—— 1924 B
A dicynodont reptile reconstructed.
Proc. Zool. Soc. Lond., 1924, 827-855, figs. 19-39.
The bibliography presents 29 titles.
Abstract in Neues Jahrb. Min. Geol. Pal., 1926, 84.

—— 1924 C
Solenodosaurus Broili, a seymouriamorph reptile.
Ann. Mag. Nat. Hist. (9), XIV, 338-343, 1 fig.
Abstract in Neues Jahrb. Min. Geol. Pal., 1926, 84.

Peck, F. B. 1904 A
The Atlantosaur and Titanotherium beds of Wyoming.
Proc. Wyom. Penn. Geol. Soc., VIII, 25-41.
Abstract in Geol. Centralbl., VII, 119.

Peet, Charles Emerson 1904 A
Glacial and post-glacial history of the Hudson and Champlain Valleys.
Jour. Geol., XII, 415-469, 617-660, 24 figs.

Pehrson, Torsten 1922 A

Points in the cranial development of teleostomian fishes.

Acta Zool., III, 1-63, 24 figs.

The bibliography comprises 59 titles.

Pellegrin, Jaques 1912 A

Sur la dentition des diables de mer.

Bull. Soc. Philom., Paris (10), IV, 91-98, 3 figs.

—— 1912 B

Sur la dentition des diables de mer et particulièrement de *Mobula olfersi* Müller.

C. R. Acad. Sci. Paris, CLIV, 721-723.

Perkins, George H. 1908 A

Fossil Cetacea of the Pleistocene of the United States and Canada, with special reference to *Delphinapterus vermontanus*.

Rep. Geol. Surv. Vermont, 1907-1908, VI, 76-112, pls. x-xx.

—— 1910 A

On a skeleton of a whale in the Provincial Museum, Halifax, Nova Scotia; with notes on the fossil Cetacea of North America.

Proc. Nova Scot. Inst., XII, 139-164, pls. i-viii.

Abstracts in Nature, LXXXIV, 371; Sci. Progress, V, 673.

—— 1910 B

History and condition of the State Cabinet [of Vermont].

Rep. Geol. Surv. Vermont, 1909-1910, VII, 1-75, pls. i-xviii.

Perkins, H. C. 1842 B

Fossil bones from Oregon.

Proc. Bost. Soc. Nat. Hist., I, 56-57, 62.

—— 1871 A

The megatherium and its allies.

Amer. Naturalist, IV, 763-765.

Perna, Giovanni 1906 A

Die Nasenbeine. Eine embryologische und vergleichend-anatomische Untersuchung.

Arch. Anat. Entwickl., 1906, 119-154, pls. iv-x.

The bibliography comprises 69 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 68-69.

Perret, Auguste 1900 A

Les dipneustes.

Rev. Scient. Paris (4), XIII, 786-788.

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—— 1899 Q

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—— 1900 E

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—— 1900 G

Review of Adloff, P., 1898 A.

Neues Jahrb. Min. Geol. Pal., 1900, II, Ref., 306-307.

—— 1900 H

Review of Scott, W. B., 1896 B.

Neues Jahrb. Min. Geol. Pal., 1900, II, Ref., 460-463.

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Neues Jahrb. Min. Geol. Pal., 1901, I, Ref., 489-493.

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Review of Leche, W., 1897 A, 1897 B.

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Review of Scott, W. B., 1895 A.

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Review of Osborn, H. F., 1898 E.

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——— 1902 B

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Neues Jahrb. Min. Geol. Pal., 1902, I, Ref., 297-300.

——— 1902 C

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——— 1902 E

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——— 1902 G

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Review of Cope, E. D., 1889 A.

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——— 1902 I

Ueber Tullberg's "System der Nagethiere nebst Bemerkungen über die fossilen Nager und die während des Tertiärs existirenden Landverbindungen."

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——— 1902 J

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Geol. Pal. Abh. Jena. (N.F.), V (XII), 117-258, pls. i-v (vi-x).

Abstracts in Neues Jahrb. Min. Geol. Pal., 1908, I, Ref., 122-129; Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 108-110.

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Neues Jahrb. Min. Geol. Pal., 1902, II, Ref., 463-477.

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——— 1903 B

Review of Wortman, J. L., 1899 A.

Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 146-148.

——— 1903 C

Review of Osborn, H. F., 1900 H.

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——— 1903 D

Review of Osborn, H. F., 1900 I.

Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 560-561.

——— 1903 E

Anthropodus oder *Neopithecus*.

Centralbl. Min. Geol. Pal., 1903, 512-513.

——— 1903 F

Review of Major, C. J. F., 1899 A.

Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 141-144.

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Abstracts of Osborn, H. F., 1899 A, 1900 F, 1900 J.

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—— 1903 H

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Neues Jahrb. Min. Geol. Pal., 1903, I, Ref., 146.

—— 1903 I

Die fossilen Säugethiere Chinas nebst einer Odontographie der recenten Antilopen.

Abh. Bayer. Akad., XXII, 1-221, pls. i-xiv, 32 text-figs.

Abstracts in Geol. Centralbl., VIII, 630-631; Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 175-178.

—— 1904 A

Notizen über einige Säugethierfaunen aus dem Miocän von Württemberg und Bayern.

Neues Jahrb. Min. Geol. Pal. Beil.-Bd. XIX, 485-502, pl. xxvi.

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—— 1904 B

J. L. Wortman's "Studies of Eocene Mammalia in the Marsh collection. Peabody Museum."

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—— 1904 C

Die fossilen Cavicornia von Samos.

Beitr. Pal. Geol. Oesterr.-Ung., XVII, 1904, 21-118, pls. iv-xiii, 4 text-figs.

—— 1905 A

Review of J. L. Wortman's "Studies of Eocene Mammalia in the Marsh collection, Peabody Museum." Part II: Primates.

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Neues Jahrb. Min. Geol. Pal., 1905, I, Ref., 125-126.

Schlosser, Max—Continued 1907 A

Review of four papers published by Ameghino in 1904, 1905, in Anales Mus. Nac. Buenos Aires, XI, XII, XIII.

Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 466-475.

—— 1907 B

Review of Barbour, E. H., 1905 B.

Neues Jahrb. Min. Geol. Pal., 1907, II, Ref., 485.

—— 1907 C

Beitrag zur Osteologie und systematischen Stellung der Gattung *Necrolemur*, sowie zur Stammesgeschichte der Primaten überhaupt.

Neues Jahrb. Min. Geol. Pal., 1907, Fest-Bd., 197-226, pl. x.

Abstracts in Geol. Centralbl., XI, 601-603; Sci. Progress, III, 452.

—— 1910 A

Über einige fossile Säugetiere aus dem Oligocän von Ägypten.

Zool. Anz., XXXV, 500-508.

Abstract in Sci. Progress, V, 662.

—— 1911 A

Beiträge zur Kenntnis der oligozänen Landsäugetiere aus dem Fayum, Ägypten.

Beitr. Pal. Geol. Oesterr.-Ung, XXIV, 1911, 51-167, pls. ix-xvi, 1 text-fig.

For a summary of this work see Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 132-142.

—— 1916 A

Neue Funde fossiler Säugetiere in der Eichstätter Gegend.

Abh. Bayer. Akad., XXVIII, art. 6, 1-78, 6 pls.

—— 1917 A

Zeitliche und räumliche Verbreitung und Stammesgeschichte der fossilen Fische.

Sitz.-Ber. Akad. Wiss. München, 1917, 131-150.

Reviewed in Neues Jahrb. Min. Geol. Pal., 1919, I, Ref., 109-110; Geol. Zentralbl., XXIII, 478.

—— 1921 A

Beiträge zur Kenntnis der Säugetierreste aus dem untersten Eocaen von Reims.

Palaeontogr., LXIII, 97-136, pls. xv-xvi, 1 text-fig.

In the bibliography (pages 99-100) are recorded 16 titles.

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Schlosser Max—Continued 1924 A

Tertiary vertebrates from Mongolia.

Palaeont. Sinica, I, fasc. 1, 1-119, pls. i-vi, 5 text-figs.

Numerous citations of the literature in foot-notes.

—— 1924 B

Über die systematische Stellung jungtertiärer Cerviden.

Centralbl. Min. Geol. Pal., 1924, 634-640.

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Die Entwickelung des Skelettes der vorderen Extremität der anuren Amphibien.

Anat. Anz., XXXI, 177-187, 5 text-figs.

—— 1908 A

Die Entwickelung des Skelettes der hinteren Extremität der anuren Amphibien.

Anat. Anz., XXXIII, 337-344, 4 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 121; XIV, pt. 3, 112-119.

—— 1908 B

Zur Morphologie des Säugetierfusses.

Anat. Anz., XXXIII, 373-378, 5 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 122.

—— 1910 A

Die Entwickelung des Extremitätenskelettes von *Salamandrella kayserlingii*.

Anat. Anz., XXXVII, 431-446, 1 pl., 7 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 139-140.

—— 1912 A

Zur Morphologie der unpaaren Flossen. I: Die Entwicklung des Skelettes und der Musculatur der unpaaren Flossen der Fische.

Zeitschr. wiss. Zool., C, 509-587, pls. xv-xviii.

—— 1913 A

Zur Morphologie der unpaaren Flossen. II: Bau und Phylogenese der unpaaren Flossen und insbesonders der Schwanzflosse der Fische.

Zeitschr. wiss. Zool., CIV, 1-80, pls. i, ii, 14 text-figs.

A list of 48 papers bearing on the subject is presented on pages 77-79.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 160-162.

Schmalhausen, J. J.—Continued 1913 B

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Zeitschr. wiss. Zool., CVII, 742-759, pl. xxiii.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 167-168.

—— 1913 C

Die unpaaren Flossen der Fische und deren Phylogenese.

Mem. Soc. Natural. Kiew, XXIII, 1-256, 6 pls., 14 text-figs.

The text is in Russian; résumé in German, pages 253-256.

There are 89 titles in the bibliography.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 160-162.

—— 1916 A

On the median fin of the Dipnoi.

Rev. Zool. Russe., I, 65-74, 8 figs.

—— 1916 B

Le développement des extrémités chez les amphibiens et leur signification dans la question de l'origine des extrémités des Tétrapodes.

Rev. Zool. Russe., I, 138-147.

—— 1916 C

On the functions of the fins of fishes.

Rev. Zool. Russe., I, 207-214, 6 figs.

—— 1917 A

On the dermal bones of the shoulder-girdle of the Amphibia.

Rev. Zool. Russe., II, 102-110, figs. d-n and a plate of 15 figs.

The Russian text occupies pages 84-102 and contains the figures.

The bibliography (pages 101-102) presents 15 titles.

—— 1917 B

On the extremities of *Ranidens sibiricus* Kessl.

Rev. Zool. Russe., II, 129-131, figs. 1-5. With also a text in Russian.

—— 1923 A

Der Suspensorialapparat der Fische und das Problem der Gehörknöchelchen.

Anat. Anz., LVI, 534-543, 10 figs.

—— 1923 B

Ueber die Autostylie der Dipnoi und der Tetrapoda.

Anat. Anz., LVI, 543-550, 3 figs.

Schmid-Monnard, Carl 1883 A
Die Histogenese des Knochens der Teleostier.
Zeitschr. wiss. Zool., XXXIX, 96-136, pls. vi-ix.

Schmidt, Bruno 1913 A
Das Gebiss des *Cyclopterus lumpus* L.
Jena. Zeitschr. Naturwiss., XLIX, 313-372, pls. xv-xvii, 23 text-figs.
Appended is a bibliography of 54 titles.

Schmidt, E. 1872 A
Zur Urgeschichte Nordamerikas.
Arch. Anthropol., V, 233-259, figs. 51-60.

Schmidt, F. 1869 A
Vorläufige Mittheilungen über die wissenschaftliche Resultate der Expedition zur Aufsuchung eines angekündigten Mammutcadavers.
Bull. Acad. Sci. St. Pétersb., XIII, 97-130.

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Wissenschaftliche Resultate der zur Aufsuchung eines angekündigten Mammuthcadavers von der kaiserlichen Akademie der Wissenschaften an den unteren Jenissei ausgesandten Expedition.
Mém. Acad. Sci. St. Pétersb. (7), XVIII, i-vi; 1-168, 5 plates, map and 10 text-figs.
Pages 28-36 are devoted to "Das Mammuth und seine Lagerstätte."

Schmidt, Karl P. 1927 A
New reptilian generic names.
Copeia, 1927, issue 163, 58-59.

Schmidt, Martin 1921 A
Hybodus hauffianus und die Belemnitenschlachtfelder.
Jahresh. Ver. Naturk. Württemb., LXVII, 103-107, 2 figs.
Abstract in Geol. Zentralbl., XXVII, 506.

Schmidt, O. 1886 A
The Mammalia in their relation to primeval times.
i-xxii+1-308 pages, 51 wood cuts.

Schmidt, Wilhelm Erich 1904 A
Über *Metriorhynchus jækeli* nov. sp.
Zeitschr. deutsch. geol. Ges., LVI, Monatsb., 97-108, 3 text-figs.

Schmidt, Wilhelm J. 1909 A
Beiträge zur Kenntnis der Parietalorgane der Saurier.
Zeitschr. wiss. Zool., XCII, 359-426, pl. xix, 23 text-figs.

Schmidt, W. J.—Continued 1910 A
Das Integument von *Voeltzkowia mira* Bttgr. Ein Beitrag zur Morphologie und Histologie der Eidechsenhaut.
Zeitschr. wiss. Zool., XCIV, 605-720, pls. xxii-xxiv, 24 text-figs.
Appended is a bibliography of 45 titles.

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Studien am Integument der Reptilien. III: Ueber die Haut der Gerrhosauriden.
Zool. Jahrb. Anat., XXXV, 75-104, pl. iv, 13 text-figs.

—— 1912 B
Studien am Integument der Reptilien. I: Die Haut der Geckoniden.
Zeitschr. wiss. Zool., CI, 138-258, pls. viii-xii, 15 text-figs.
The bibliography furnishes 49 titles.

—— 1912 C
Studien am Integument der Reptilien. II: Die Hautverknöcherungen von Heloderma.
Zool. Jahrb. Arb. Supplem., XV (Festschr. Spengel), 219-228, pl. xiii, 3 text-figs.

—— 1914 A
Studien am Integument der Reptilien. V: Anguiden.
Zool. Jahrb. Anat., XXXVIII, 1-102, pls. i-vi, 25 text-figs.

—— 1914 B
Studien am Integument der Reptilien. VI: Über die Knochenschuppen der Crocodile.
Zool. Jahrb. Anat., XXXVIII, 643-666, pls. i-xxxix, 11 text-figs.

—— 1916 A
Ueber den dermalen Ursprung der Neuralplatten des Schildkrötencarapax.
Zool. Anz., XLVII, 9-14, 2 figs.

—— 1920 A
Über Schuppenrudimente und Hautsinnesorgane bei *Emyda granosa.*
Zool. Anz., LII, 10-20, 5 figs.
There are 7 titles in the bibliography.

Schmidtgen, O. 1911 A
Die scapula von *Halitherium schinzi* juv.
Centralbl. Min. Geol. Pal., 1911, 221-223, 1 text-fig.
Abstract in Geol. Centralbl., XVI, 713; Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 175.

Schmidtgen, O.—Continued 1912 A
Neue Beiträge zur Kenntniss der hinteren Extremität von *Halitherium schinzi* Kaup.
Zool. Jahrb. Arb. Supplem., xv (Festschr. Spengel), 457-498, pl. xxix, 2 text-figs.
There is a bibliography of 10 titles.

——— 1926 A
Über *Elephas trogontherii* Pohl.
Palaeont. Zeitschr., viii, 62-68, 3 figs.
Followed in discussion by Sewertzoff, Bather, Pompeckj and Jaekel.

Schneider, Anton 1887 A
Ueber die Dipnoi und besonders die Flossen derselben.
Zool. Beitr., ii, 97-105, pl. xi, 1 text-fig.

Schöne, G. 1902 A
Vergleichende Untersuchungen über die Befestigung der Rippen an der Wirbelsäule, mit besonderer Berücksichtigung ihrer Lage zur Arteria vertebralis.
Morphol. Jahrb., xxxi, 1-43, 1 plate, 6 text-figs.
Appended is a bibliography of 28 titles.

Schönfield, G. 1911 A
Branchiosaurus tener Schönfield. Ein neuer Stegocephale aus dem Rotliegenden des nordwestlichen Sachsen.
Abh. naturw. Ges. Isis, 1911, 19-43, pls. i-iii.
There is presented a bibliography of 93 titles. Abstracts in Geol. Centralbl., xiii, 585-586; xviii, 88-89; Nature, lxxxvii, 495; Sci. Progress, vi, 580.

Schoenichen, W. 1900 A
Mundwerkzeuge im Thierreiche.
Deutche Monatschr. Zahnheilk., Jahrg., xviii, 500-510.

Schorr, Georg 1907 A
Zur Entwickelungsgeschichte des sekundären Gaumens bei einigen Säugetieren und beim Menschen.
Anat. Anz., xxx, 24-26, 1 fig.

——— 1908 A
Die Entwickelungsgeschichte des sekundären Gaumens bei einigen Säugetieren und beim Menschen.
Anat. Hefte, xxxvi, 68-106 1 pl., 19 text-figs.
There are 10 titles included in the bibliography.
Abstract in Jahresber. Anat. Entwickl. (N.F.), xii, pt. 3, 75.

Schrader, Frank C. 1915 A
Mineral deposits of the Santa Rita and Patagonia Mountains, Arizona.
Bull. U. S. Geol. Surv., dlxxxii, 1-373, pls. i-xxv, 46 text-figs.

Schreiner, K. E. 1902 A
Einige Ergebnisse über den Bau und die Entwicklung der Occipitalregion von *Amia* und *Lepidosteus.*
Zeitschr. wiss. Zool., lxxii, 467-524, pls. xxviii, xxix, 20 text-figs.

Schrenck, Leopold v. 1871 A
Bericht über neuerdings in Norden Siberiens angeblich zum Vorschein gekommene Mammuthe, nach brieflichen Mittheilungen des Hrn. Gerh. v. Maydell, nebst Bermerkungen über den Modus der Erhaltungen und die vermeinthleiche Häufigkeit ganzer Mammutleichen.
Mel. biol., vii, 718-756.

Schubert, R. J. 1902 A
Die Fischotolithen des österr.-ungar. Tertiärs. I: Die Sciaeniden.
Jahrb. geol. Reichsanst. Wien, li, 301-315, pl. x, 5 text-figs.

——— 1905 A
Die Fischotolithen des österr.-ungar. Tertiärs. II: Macruriden und Beryciden.
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Jahrb. geol. Reichsanst. Wien, lvi, 623-706, pl. xxi, 22 text-figs.
There is a bibliography of 22 papers on otoliths of fishes.

Schuchert, Charles 1905 A
The mounted skeleton of *Triceratops prorsus* in the U. S. National Museum.
Amer. Jour. Sci. (4), xx, 458-459, pl. xv.

——— 1905 B
John Bell Hatcher.
Amer. Geologist, xxxv, 131-141, pl. xi.

——— 1910 A
Paleogeography of North America.
Bull. Geol. Soc. Amer., xx, 427-606, pls. xlvi-ci.

——— 1913 A
The dinosaurs of East Africa.
Amer. Jour. Sci. (4), xxxv, 34-38, 1 map.

——— 1914 A
Mammut americanum in Connecticut, with a note on the Farmington specimen, by Richard S. Lull.
Amer. Jour. Sci. (4), xxxvii, 321-330, 3 figs.
Abstracts in Rev. crit. Paléozool., xviii, 153; Geol. Zentralbl., xxi, 621.

Schuchert, Charles—Continued 1914 B
Climates of geologic time.
Publ. Carnegie Instn. Wash., No. 192, 266-296.

—— 1915 A
Historical geology.
Pirsson and Schuchert's *"Text-book of Geology,"* 405-830, 844-992, pls. i-xxx, xxxiv-xl, text-figs. 312-522.

—— 1918 A
On the Carboniferous of the Grand Canyon of Arizona.
Amer. Jour. Sci. (4), XLV, 347-370, figs. 1-5.

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Age of the American Morrison and east African Tendaguru formations.
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A paleontologic revival at Yale University.
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Review of the "Pleistocene of North America," etc., by Oliver P. Hay.
Amer. Jour. Sci. (5), V, 424-425.

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The rise of natural history museums in the United States.
Bull. Peabody Mus. Nat. Hist., I, 1-23.

——, and Joseph **Barrell** 1914 A
A revised geologic time-table for North America.
Amer. Jour. Sci. (4), XXXVIII, 1-27, 2 text-figs.

——, and Clara M. **Levene** 1927 A
The earth and its rhythms.
8vo., i-xvi+1-410 pages, numerous illustrations.

Schulte, H. von W. 1916 A
The Sei whale (*Balænoptera borealis* Lesson).
Mem. Amer. Mus. Nat. Hist. (n.s.), I, pt. vi, 391-502, pls. xliii-lvii.

Schulthess, Betty 1920 A
Beiträge zur Kenntnis der Xenarthra auf Grund der "Santiago Roth"-schen Sammlung" der zoologischen Museums der Universität Zurich.
Abh. Schweiz. pal. Ges., XLIV, art. 4, 1-119, pls. i-vi, 55 text-figs.
The bibliography contains 148 titles.
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Schumacher, S. 1905 A
Spezielle Anatomie und Entwicklungsgeschichte des Menschen und der Wirbeltiere. IV: Skeletsystem. C. Extremitätenskelet.
Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 101-145.
Pages 101-108 are occupied by a bibliography of papers, abstracts of which follow on pages 108-145.

Schumann, Alfred 1904 A
Das Skelett der Hinterextremität von *Dipus ægypticus* (Hempr. et Ehrbg).
Morphol. Jahrb., XXXII, 233-287, pls. vii, viii.
There is a bibliography of 21 titles.

Schwalbe, G. 1904 A
Über das Gehirnrelief des Schädels bei Säugetieren.
Zeitschr. Morphol. Anthrop., VII, 203-222, pls. ii, iii, 4 text-figs.

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The place of the cartilaginous ganoids in the system and the evolution of the Osteichthyes.
Jour. Morphol., XXXVIII, 105-145, 4 figs.
The bibliography consists of 15 titles.
Abstract in Neues Jahrb. Min. Geol. Pal., 1926, I, Ref., 75.

——— 1924 A
The development of the dorsal fin of *Polypterus delhesi.*
Jour. Morphol., XXXVIII, 551-580, 14 figs.

——— 1925 A
Zur Morphologie des Schädels von *Polypterus delhesi.*
Anat. Anz., LIX, 271-278, 6 figs.

——— 1926 A
Studies on the bony skull of fishes. I: Structure and development of the bony skull of *Acipenser ruthenus.*
Quart. Jour. Micr. Sci., LXX, 451-540, 40 figs.
There are 29 titles in the bibliography.

——— 1926 B
Development of the pelvic fins of *Acipenser ruthenus.* New data for the theory of the paired fins of fishes.
Jour. Morphol., XLI, 547-579, 23 figs.

——— 1926 C
Beiträge zu einer Theorie des knöchernen Schädels der Wirbeltiere.
Palaeont. Zeitschr., VIII, 42-43, 44.

——— 1926 D
Der Ursprung der Quadrupeda.
Palaeont. Zeitschr., VIII, 75-95, 24 figs.

——— 1926 E
The development of the scales of *Acipenser ruthenus.*
Jour. Morphol. Physiol., XLII, 523-560, figs. 1-38.

Sewertzoff, A. N.—Continued 1926 F
Über den Bau und die Funktion der Rippen von *Polypterus*.
Anat. Anz., LXI, 274-280, 2 figs.

——, and N. N. **Disler** 1924 A
Der Pharyngomandibulare der Selachier.
Anat. Anz., LVIII, 345-349, 3 figs.

Seydel, Otto 1899 A
Ueber Entwicklungsvorgänge an der Nasenhöhle und am Mundhöhlendache von *Echidna*, nebst Beiträgen zur Morphologie des peripheren Geruchsorgans und des Gaumens der Wirbelthiere.
Semon's "Zool. Forschungsr.," III, 445-532, pls. xv, xvi, 31 text-figs.
The bibliography comprises 90 titles.

Shaler, N. S. 1870 A
Remarks upon the change in the geographical distribution of the American buffalo.
Proc. Bost. Soc. Nat. Hist., XIII, 136.

—— 1877 A
Notes on the investigation of the Kentucky Geological Survey during the years 1873, 1874, and 1875.
Rep. Geol. Surv. Kentucky, pt. i, III, 2nd ser., 130-240.
Contains account of Big Bone Lick and its fossil vertebrates.

—— 1888 A
Habits of the great southern tortoise.
Pop. Sci. Month., XXXIV, 37-42.

——, and J. B. **Woodworth** 1899 A
Geology of the Richmond Basin, Virginia.
Rep. U. S. Geol. Surv., XIX, pt. 2, 385-519, pls. xviii-lii, text-figs. 90-116.

Shaner, Ralph F. 1926 A
The development of the skull of the turtle, with remarks on fossil reptile skulls.
Anat. Record, XXXII, 343-367, 16 figs.
The bibliography presents 18 titles.

Shann, E. W. 1919 A
The comparative myology of the shoulder girdle and pectoral fin of fishes.
Trans. Roy. Soc. Edinb., LII, 531-570, 4 pls., 1 text-fig.
The bibliography comprises 93 titles. The paper deals principally with the musculature.

Sharp, Katherine D. 1903 A
The story of the *Dinichthys*.
Amer. Invent., X, 263.

Sharpe, R. Bowdler 1891 A
A review of recent attempts to classify birds.
Internat. Ornith. Congr., II, Budapest, 1891, 1-90, 12 plates.

Shattuck, George Burbank 1904 A
Geological and geographical distribution of species of Maryland Miocene.
Maryland Geol. Surv. Miocene. Text, xciii-cxxxvii.
The list of vertebrate fossils is found on pages xciv-xcvii.

——, B. L. **Miller** and A. **Bibbins** 1907 A
Description of the Patuxent quadrangle.
Folio U. S. Geol. Surv., CLII, 1-12, 3 maps, 2 text-figs.

Shaw, D. Mackintosh 1917 A
Form and function of teeth: A theory of "maximum shear."
Jour. Anat. Lond., LII, 97-106.

Shaw, E. W., and T. E. **Savage** 1912 A
Description of the Murphysboro and Herrin [Ills.] quadrangles.
Folio U. S. Geol. Surv., CLXXXV, 1-15, 6 maps, 13 text-figs.

Shaw, James 1873 A
Geology of Ogle County [Illinois].
Geol. Surv. Ill., V, 104-123.

Sheldon, Pearl 1915 A
Mastodon tusk in glacial gravels.
Science (n.s.), XLI, 98-99.
On a supposed mastodon tusk found near Ithaca, New York.

Shepard, Edward M. 1898 A
A report on Greene County [Missouri].
Geol. Surv. Missouri, XII, pt. i, 13-245, i-iv, and maps.

Shepherd, C. E. 1910 A
Pharyngeal teeth of fishes.
Zoologist (4), XIV, 418-425, pl. ii, 2 text-figs.

—— 1910 B
Comparisons of otoliths found in fishes.
Zoologist (4), XIV, 292-298, 2 pls.

—— 1911 A
The pharyngeal teeth of fishes.
Zoologist (4), XV, 132-141, 450-456, pls. i, ii, 18 text-figs.

—— 1912 A
The pharyngeal teeth of fishes.
Zoologist (4), XVI, 201-209, 450-459, 8 figs.

Shepherd, C. E.—Continued 1913 A
The pharyngeal teeth of fishes.
Zoologist (4), XVII, 138-146, 382-389, 7 figs.

—— 1914 A
The pharyngeal teeth of fishes.
Zoologist (4), XVIII, 262-272, 3 figs.

—— 1916 A
Fossil otoliths.
Knowledge, London, XXXIX, 177-184, 203-205, figs. 151-157.
A bibliography of 10 papers is furnished.

Sherborn, S. W.
See **Woodward,** A. S. and S. W. **Sherborn.**

Shiino, Kotaro 1914 A
Das Chondrocranium von Crocodilus mit Berücksichtigung der Gehirnnerven und der Kopfgefässe.
Anat. Hefte, Arb., L, 253-382, pls. xv-xxi, 33 text-figs.
The appended bibliography comprises 46 titles.

Shimada, K. 1911 A
Über die Wirbelsäule und die Hüllen des Rückenmarks von *Cryptobranchus japonicus.*
Anat. Hefte, Arb., XLIV, 1-91, pls. i-v, 15 text-figs.
Appended is a bibliography of 48 titles.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 136-138.

Shimek, B. 1902 A
The loess of Natchez, Miss.
Amer. Geologist, XXX, 279-299, pls. x-xvi.

—— 1904 A
Papers on the loess. The loess of Natchez, Miss.; The loess and the Lansing man; The Lansing deposit, not loess; Loess and the Iowan drift. Evidences (?) of water deposition of Loess.
Bull. Nat. Hist. Iowa, V, 298-381, pls. i-xiv.

—— 1908 A
Aftonian sands and gravels in western Iowa.
Science (n.s.), XXVIII, 923.

—— 1909 A
Aftonian sands and gravels in Iowa.
Bull. Geol. Soc. Amer., XX, 399-408, pls. xxxiii-xxxvii.
Abstract in Geol. Centralbl., XIX, 35.

—— 1910 A
Evidence that the fossiliferous gravel and sand beds of Iowa and Nebraska are Aftonian.
Bull. Geol. Soc. Amer., XXI, 119-140, pl. ii.
Abstract in Geol. Centralbl., XIX, 35.

Shimek, B.—Continued 1910 B
Geology of Harrison and Monona Counties [Iowa].
Iowa Geol. Surv., XX, 273-485, 2 maps, pls. xxi-xli.

—— 1912 A
Pleistocene of Sioux Falls, South Dakota, and vicinity.
Bull. Geol. Soc. Amer., XXIII, 125-154, pls. 7-10.

Shimer, Hervey W. 1903 A
Adaptations to aquatic, arboreal, fossorial and cursorial habits in mammals.
Amer. Naturalist, XXXVII, 819-825.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1906, I, Ref., 137-138; Naturw. Wochenschr., XX (N.F. IV), 101-105.

—— 1914 A
Restoration of extinct reptiles.
Sci. Conspectus, IV, 108, 2 figs.

Shitkov, B. M. 1899 A
Über den Bau und die Entwicklung des Skelettes der freien Gliedmassen des *Isodactylium schrenkii* Strauch.
Zool. Anz., XXII, 246-257, 8 text-figs.

——, and L. L. **Sabanejew** 1909 A
Über *Ovis heinsii* Sewertz. und über den Bau der Hörner der Wildschafe.
Zool. Jahrb. Syst., XXVIII, 457-472, 11 text-figs.

Shore, Thomas W. 1887 A
On the relations of the Mammalia to the Ichthyopsida and Sauropsida.
Jour. Anat. Physiol. Lond., XXI, 362-373.

Short, Howard 1914 A
Wing adjustments of pterodactyls.
Aeronaut. Jour. London, XVIII, 336-342, 5 figs.
Followed by an editorial note.

Shufeldt, R. W. 1881 F
The claw on the index digit of the Cathartidæ.
Amer. Naturalist, XV, 906-908.

—— 1882 A
The number of bones at present known in the pectoral and pelvic limbs of birds.
Amer. Naturalist, XVI, 892-895.

—— 1882 B
Concerning some of the forms assumed by the patella in birds.
Proc. U. S. Nat. Mus., VII, 324-331, 7 text-figs.

Shufeldt, R. W.—Continued 1883 D

The habits of *Murœnopsis tridactylus* in captivity; with observations on its anatomy.

Science (o.s.), II, 159-163, 4 figs.

——— 1884 B

Osteology of the large-mouthed black bass *(Micropterus salmoides)*.

Sci. (o.s.), III, 332, 749, fig.

——— 1885 C

A complete fibula in an adult living carinate bird.

Science (o.s.), V, 516, 1 text-fig.

——— 1886 D

Feathered forms of other days.

Cent. Mag., IX, 352-365, 11 figs.

Reviewed in Amer. Naturalist, XXXVII, 1908, 34.

——— 1887 A

A critical comparison of a series of skulls of the wild and domesticated turkeys.

Jour. Comp. Med. Surg., VIII, 207-222, 7 figs.

——— 1889 D

Remarks upon the extinct mammals of the United States.

1-38 pages, 12 figs.

Reprinted from the American Field, XXXII, 1889, Nos. 17-22.

——— 1890 D

Contributions to the study of *Heloderma suspectum*.

Proc. Zool. Soc. Lond., 1890, 148-214, pls. xvi-xviii.

The bibliography occupies pages 235-243, 64 titles.

——— 1891 D

On the question of saurognathism of the Pici and other osteological notes upon that group.

Proc. Zool. Soc. Lond., 1891, 122-129.

——— 1891 E

On the comparative osteology of the United States Columbidæ.

Ibis (6), VI, 194-196.

——— 1893 B

On the mechanism of the upper mandible in the Scolopacidæ.

Ibis (6), V, 563-565, 1 text-fig.

——— 1893 C

Notes on palæopathology.

Pop. Sci. Month., XLII, 679-684, 2 text-figs.

——— 1893 D

On the classification of the Longipennes.

Amer. Naturalist, XXVII, 233-237.

Shufeldt, R. W.—Continued 1893 E

Notes on palæopathology.

Pop. Sci. Month., XLII, 679-684, 2 figs.

——— 1895 A

On the osteology of certain cranes, rails, and their allies, with remarks upon their affinities.

Jour. Anat. Physiol. Lond., XXIX (n.s. IX), 21-34, 3 figs.

——— 1896 A

Progress in American ornithology.

Amer. Naturalist, XXX, 357-372.

A review of The A. O. U. Check-list of North American birds.

——— 1900 B

On the osteology of the Striges.

Proc. Amer. Philos. Soc., XXXIX, 665-722, pls. x-xvii, 6 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 435.

——— 1900 C

On the osteology of the woodpeckers.

Proc. Amer. Philos. Soc., XXXIX, 578-622, pl. ix, 11 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 434-435.

——— 1900 D

Professor Collett on the morphology of the cranium and the auricular openings in the North-European species of the family Strigidæ.

Jour. Morphol., XVII, 119-176, pls. xv-xx, 7 text-figs.

——— 1901 A

Osteology of the Herodiones.

Ann. Carnegie Mus., I, 158-249, pls. v, vi, 43 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 437.

——— 1901 B

Osteology of the flamingoes.

Ann. Carnegie. Mus., I, 295-324, pls. ix-xiv.

Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 438.

——— 1901 C

Osteology of the cuckoos.

Proc. Amer. Philos. Soc., XL, 4-51, pls. i, ii.

Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 436.

——— 1901 D

On the osteology of the pigeons (Columbæ).

Jour. Morphol., XVII, 487-511, pls. A. B., 4 text-figs.

Shufeldt, R. W.—Continued 1901 E
The skeleton of the black bass.
Bull. U. S. Fish Comm., XIX (1899), 1901, 311-320, pl. xliv, 8 text-figs.

—— 1902 A
The osteology of the Steganopodes.
Mem. Carnegie Mus., I, 109-223, pls. xxi-xxx, 37 text-figs.
Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 436-437.

—— 1903 A
Osteology of the Limicolæ.
Ann. Carnegie Mus., II, 15-70, pl. i, 27 text-figs.
Abstract in Neues Jahrb. Min. Geol. Pal., 1903, II, Ref., 438.

—— 1903 B
On the classification of certain groups of birds. (Supersuborders: Archornithiformes; Dromæognathæ; Odontoholcæ.)
Amer. Naturalist, XXXVII, 33-64, 2 text-figs.

—— 1904 A
On the osteology and systematic position of the Pygopodes.
Amer. Naturalist, XXXVIII, 13-49, pl. i, 2 text-figs.

—— 1904 B
An arrangement of the families and the higher groups of birds.
Amer. Naturalist, XXXVIII, 833-857; 6 text-figs.

—— 1904 C
Comparison of the provisional schemes of the classification of birds.
Amer. Naturalist, XXXVIII, 311-319.

—— 1907 A
On the osteology of the Tubinares.
Amer. Naturalist, XLI, 109-124, 2 text-figs.

—— 1907 B
The flight of *Archæopteryx*.
Discovery, New York, I, 114.

—— 1909 A
Osteology of birds.
1: Osteology of the Accipitres. Page 5.
2: Osteology of the Gallinæ. Page 169.
3: Osteology and classfication of the Anseres. Page 249.
Bull. N. Y. State Mus., No. CXXX, 1-381, 26 plates, 145 text-figs.

—— 1911 A
An arrangement of the families and the higher groups of the Mammalia.
Nyt Mag. Naturv., XLIX, 65-80.

Shufeldt, R. W.—Continued 1913 A
Contributions to avian paleontology.
Auk, XXX, 29-39, pl. iii.

—— 1913 B
Review of the fossil fauna of the desert region of Oregon, with a description of additional material collected there.
Bull. Amer. Mus. Nat. Hist., XXXII, 123-178, pls. ix-xliii.
Abstracts in Rev. crit. Paléozool., XXI, 48; Geol. Zentralbl., XXI, 622.

—— 1913 C
Further studies of fossil birds, with descriptions of new and extinct species.
Bull. Amer. Mus. Nat. Hist., XXXII, 285-306, pls. li-lix.
Paper announced in Science (n.s.), 306, with list of species, but no descriptions.
Abstracts in Sci. Progress, VIII, 638; Rev. crit. Paléozool., XXI, 48; Geol. Zentralbl., XXI, 238.

—— 1913 D
Fossil feathers and some heretofore undescribed fossil birds.
Jour. Geol., XXI, 628-652, 12 text-figs.
Abstracts in Geol. Centralbl., XX, 704; Sci. Progress, VIII, 638.

—— 1913 E
On the patella in the Phalacrocoracidæ.
Proc. Zool. Soc. Lond., 1913, 393-402, pl. lxi.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 169.

—— 1913 F
New and extinct birds and other species from the Pleistocene of Oregon.
Science (n.s.), XXXVII, 306-307.
Presents a list of 25 species.

—— 1913 G
Extinct ostrich birds of the United States.
Aquila, XX, 411-422, pls. i-v. In Hungarian and English.

—— 1913 H
The wild turkey and its hunting.
The Illustrated Outdoor World and Recreation, New York, XLVIII, 94-98; 146-147, 34 figs.
Articles written by R. W. Shufeldt for Edward A. McIlhenney, in part; in part by McIlhenney himself.

—— 1914 A
The biggest bird that ever lived.
Scient. Amer., CX, 245-246, 329, fig. on cover.

Shufeldt, R. W.—Continued 1914 B

On the skeleton of the ocellated turkey *(Agriocharis ocellata)* with notes on the osteology of other Melcagridæ.

Aquila, XXI, 1-52, 14 pls.
Printed in Hungarian and English.
Citations of the literature are in footnotes.

——— 1914 C

Contribution to the study of the "treeducks" of the genus *Dendrocygna.*

Zool. Jahrb. Syst., XXXVIII, 1-70, pls. i-xvi.

——— 1915 A

On a restoration of the base of the cranium of *Hesperornis regalis.*

Bull. Amer. Pal., V, 73-85 (1-13 of reprint), pls. i, ii.
For brief note on see Aquila, XXII (1915), 400.

——— 1915 B

A critical study of the fossil bird *Gallinuloides wyomingensis* Eastman.

Jour. Geol., XXXIII, 619-634, 2 text-figs.
For abstract see Aquila, XXII (1915), 399.

——— 1915 C

Comparative osteology of certain rails and cranes, and the systematic positions of the supersuborders Gruiformes and Ralliformes.

Anat. Record, IX, October, 1915, 731-750, 9 text-figs.

——— 1915 D

Fossil birds in the Marsh collection of Yale University.

Trans. Conn. Acad. Arts Sci., XIX, 1-110, pls. i-xv.
Abstracts in Aquila, XXII (1915), 398-399; Rev. crit. Paléozool., XX, 89.

——— 1915 E

On the taxonomy of the Procyonidæ.

Science (n.s.), XLI, 691-692.

——— 1915 F

The fossil remains of a species of *Hesperornis* found in Montana.

Auk, XXXII, 290-294, pl. xviii.
For brief note on this paper see Aquila, XXII (1915), 400.

——— 1915 G

Fossil remains of the extinct cormorant *Phalacrocorax macropus* found in Montana.

Auk, XXXII, 485-488.

Shufeldt, R. W.—Continued 1916 A

Gilmore's restoration of *Ceratosaurus nasicornis.*

Scient. Amer. Suppl., No. 2098, 187, 1 text-fig.

——— 1916 B

Monster extinct reptiles. Some recent restorations at the National Museum.

Scient. Amer. Suppl., No. 2089, 40-42, 7 text-figs.

——— 1916 C

New extinct bird from South Carolina.

Geol. Mag., III, 343-347, pl. xv.
Abstracts in Geol. Zentralbl., XXIII, 445; XXVI, 379.

——— 1916 D

Fossil birds' eggs.

Emu, XVI, 80-91, pls. xxi-xxv.

——— 1916 E

Report on fossil birds from Vero, Florida.

Jour. Geol., XXV, 18-19.
Reprints of this paper were distributed a few days before Jan. 1, 1917. Reviewed in Auk, XXXIV, 357.

——— 1916 F

The restoration of *Podokesaurus holyokensis.*

Jour. Wash. Acad. Sci., VI, 258-259.

——— 1917 A

Observations on the osteology of the porcupine fish *(Diodon hystrix).*

Anat. Record, XI, 1-3.

——— 1917 B

Fossil birds found at Vero, Florida.

Rep. Florida Geol. Surv., IX, 35-42, pls. i, ii, text-figs. 1-25.
Abstract in Rev. crit. Paléozool., XXV, 15.

——— 1917 C

On the Government collection of fossil fishes.

Aquarium Bull., Nov. 1917, 49-51, a text-figure of *Priscacara dartoni.*
Included is a list, probably not wholly complete, of the fossil fishes in the U. S. National Museum.

——— 1917 D

Fossil remains of what appears to be a passerine bird from the Florissant shales of Colorado.

Proc. U. S. Nat. Mus., LIII, 453-455, pls. lx, lxi.
Described remains of a wholly indeterminable bird.

Shufeldt, R. W.—Continued 1918 A
Notes on some bird fossils from Florida.
Auk, xxxv, 357-358.

—— 1920 A
Baker on the birds of the Pleistocene.
Auk, xxxvii, 634-635.

—— 1921 A
Observations on the cervical region of the spine in chelonians.
Jour. Morphol., xxxv, 213-223, pls. i, ii.

—— 1922 A
Remarkable changes in the skull of an American badger *(Taxidea taxus)* due to age.
Jour. Mamm., iii, 173-175, pl. x.

—— 1924 A
The skull of the wolverine *(Gulo luscus)*.
Jour. Mamm., v, 189-193, pls. xxi, xxii.

Shuler, Ellis W. 1917 A
Dinosaur tracks in the Glen Rose limestone, near Glen Rose, Texas.
Amer. Jour. Sci. (4), xliv, 294-298, 3 figs.
Abstract in Geol. Zentralbl., xxv, 505.

—— 1923 A
Occurrence of human remains with Pleistocene fossils, Lagow sand pit, Dallas, Texas.
Science (n.s.), lvii, 333-334.

Shumard, B. F. 1855 A
Description of a geological section, on the Mississippi River, from St. Louis to Commerce.
Geol. Surv. of Missouri, i, ii, by G. C. Swallow, pt. ii, 139-184.

—— 1863 A
Discovery in Texas of dicotyledonous leaves in Cretaceous strata and the existence of an extensive Miocene formation.
Trans. Acad. Sci. St. Louis, ii, 140-141.

—— 1873 A
S'te Genevieve and Jefferson Counties [Missouri].
Geol. Surv. Missouri, 1855-1871. Ralph Pumpelly, director. 290-313, maps.

Sicher, Harry 1916 A
Die Entwicklung des Gebisses von *Talpa europæa*.
Anat. Hefte, Arb., liv, 31-112, pls. iii-vi, 20 text-figs.
The bibliography cites 13 papers.

Siebenrock, F. 1892 B
Ueber Wirbelassimilation bei den Sauriern.
Ann. naturh. Hofmus. Wien, vii, 373-378, 2 figs.

—— 1900 A
Der Zungenbeinapparat und Kehlkopf sammt Luftröhre von *Testudo calcarata* Schneid.
Sitz.-Ber. Akad. Wiss. Wien, cix, Abth. i, 441-448, 1 plate.

—— 1901 A
Ueber die Verbindungsweise des Schultergürtels mit dem Schädel bei den Teleosteern.
Ann. naturh. Hofmus. Wien, xvi, 105-141, pls. iv-vi.
The bibliography comprises 73 titles.

—— 1902 A
Zur Systematik der Schildkrötenfamilie Trionychidæ Bell, nebst Beschreibung einer neuen *Cyclanorbis*-Art.
Sitz.-Ber. Akad. Wiss. Wien, xci, 807-846, 18 figures in the text.
Plastra of all the species are figured.

—— 1906 A
Ergebnisse einer zoologischen Forschungsreise von Dr. Franz Werner nach Ägypten und im ägyptischen Sudan, iv, Krokodile und Schildkröten.
Sitz.-Ber. Akad. Wiss. Wien, cxv, Heft 6, 817-839, 8 figs.

—— 1907 A
Die Schildkrötenfamilie Cinosternidæ. Monographisch bearbeitet.
Sitz.-Ber. Akad. Wiss. Wien, cxvi, Abth. 1, 527-599, pls. i, ii, 2 maps, 8 text-figs.

—— 1909 A
Synopsis der rezenten Schildkröten, mit Berücksichtigung der in historischer Zeit ausgestorbenen Arten.
Zool. Jahrb., Suppl., x, 427-618.

—— 1919 A
Emydura macquarrii Gray und der systematische Wert des Nuchalschildes bei den Schildkröten.
Zool. Anz., l, 273-277.

—— 1923 A
Die nearktischen Trionychidæ.
Verh. zool.-bot. Ges. Wien, lxxiii, 180-194.

Sieglbauer, Felix 1909 A
Zur Anatomie der Schildkrötenextremität.
Arch. Anat. Physiol. Leipzig., 183-280, pls. vii-x, 4 text-figs.
Appended is a bibliography of 42 titles.
The paper deals almost wholly with the muscles and nerves.

—— 1911 A
Zur Entwicklung der Vogelextremität.
Zeitschr. wiss. Zool., XCVII, 262-313, pls. xiii, xiv, 16 text-figs.
This paper is followed by a list of 30 works on the subject.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 176.

Silliman, B., Sr. 1831 A
Remarks on Cooper, Smith and Dekay's report.
Amer. Jour. Sci. (1), XX, 371-372.

Silliman, B. 1855 A
On the subject of petrifaction.
Warren's *Monograph on Mastodon,* ed. 2, 221-222.

Simoens, G. 1902 A
Note sur *Helicoprion bessonowi* (Karpinsky).
Bull. Soc. belge Géol. (2), XIII, Pr. verb., 235-243, 6 figs.

Simpson, George Gaylord 1924 A
The American triconodonts.
Geol. Soc. Amer. Prelim. lists, 1924, 39.

—— 1925 A
American triconodonts.
Bull. Geol. Soc. Amer., XXXVI, 229 (Abstract).

—— 1925 B
Mesozoic Mammalia. I: American triconodonts. II: *Tinodon* and its allies. III: Preliminary comparison of Jurassic mammals, except multituberculates.
Amer. Jour. Sci. (5), X, 145-165, 332-358, 451-470, 559-569, 40 figs.
On page 358 is a bibliography of 30 titles.
Abstracts in Neues Jahrb. Min. Geol. Pal., 1926, 90-94.

—— 1925 C
A Mesozoic mammal skull from Mongolia.
Amer. Mus. Novit., CCI, 1-11, 7 figs.

—— 1925 D
Review of Johan Kiaer on "The Downtonian Fauna of Norway. I: *Anaspida,* etc."
Science (n.s.), LXII, 288-289.

Simpson, George G.—Cont'd 1926 A
Are *Dromatherium* and *Microconodon* mammals?
Science (n.s.), LXIII, 548-549.

—— 1926 B
Pre-Cretaceous evolution of mammalian lower molars.
Bull. Geol. Soc. Amer., XXXVII, 238 (Abstract).

—— 1926 C
New reconstruction of *Lasanius.*
Bull. Geol. Soc. Amer., XXXVII, 397-402, 1 fig.

—— 1926 D
Mesozoic Mammalia. IV: The multituberculates as living animals.
Amer. Jour. Sci. (5), XI, 228-250, 8 figs.

—— 1926 E
The fauna of Quarry 9.
Amer. Jour. Sci. (5), XII, 1-11, 1 fig.

—— 1926 F
American terrestrial Rhynchocephalia.
Amer. Jour. Sci. (5), XII, 12-16, 2 figs.

—— 1926 G
Mesozoic Mammalia. V: *Dromatherium* and *Microconodon.*
Amer. Jour. Sci. (5), XII, 87-108.

—— 1926 H
The age of the Morrison formation.
Amer. Jour. Sci. (5), XII, 196-216.
The bibliography presents 23 titles.

—— 1926 I
Review of G. Heilmann's *Origin of Birds.*
Amer. Jour. Sci. (5), XI, 453-454.

—— 1926 J
Review of F. von Huene's *The carnivorous dinosaurs in the Jura and Cretaceous formations, principally in Europe.*
Amer. Jour. Sci. (5), XII, 458.

—— 1926 K
Review of David Black's *Asia and the dispersal of the Primates.*
Amer. Jour. Sci. (5), XV, 459.

—— 1927 A
Mammalian fauna of the Hell Creek formation of Montana.
Amer. Mus. Novit., CCLXVII, 1-7, 6 figs.

—— 1927 B
Mammalian fauna and correlation of the Paskapoo formation of Alberta.
Amer. Mus. Novit., CCLXVIII, 1-10.

Simpson, George G.—Cont'd 1927 C

Mesozoic Mammalia. VI: Genera of Morrison pantotheres.

Amer. Jour. Sci. (5), XIII, 409-416.

—— 1927 D

Mesozoic Mammalia. VII: Taxonomy of Morrison multituberculates.

Amer. Jour. Sci. (5), XIV, 36-38.

—— 1927 E

Tathiodon, new genus, to replace *Tanaodon* Simpson non Kirk.

Amer. Jour. Sci. (5), XIV, 71.

—— 1927 F

Mesozoic Mammalia. VIII: Genera of Lance mammals other than multituberculates.

Amer. Jour. Sci. (5), XIV, 121-130.

—— 1927 G

Mesozoic Mammalia. IX: The brain of Jurassic mammals.

Amer. Jour. Sci. (5), XIV, 259-268, 4 figs.

—— 1928 A

A new mammalian fauna from the Fort Union of southern Montana.

Amer. Mus. Novit., CCXCVII, 1-15, 14 figs.

—— 1928 B

Mesozoic Mammalia. XI: *Brancatherium tendagurense* Dietrich.

Amer. Jour. Sci. (5), XV, 303-308, 2 figs.

—— See also **Gregory** and **Simpson.**

Sinclair, W. J. 1901 A

The discovery of a new fossil tapir in Oregon.

Jour. Geol., IX, 702-707, 1 text-fig.

Abstract in Geol. Centralbl., II, 762.

—— 1903 A

A preliminary account of the exploration of the Potter Creek Cave, Shasta County, California.

Science (n.s.), XVII, 708-712.

Abstracts in Geol. Centralbl., IX, 639; Neues Jahrb. Min. Geol. Pal., 1904, II, Ref., 291.

—— 1903 B

A new tortoise from the auriferous gravels of California.

Bull. Dept. Geol. Univ. Calif., III, 243-248, two figures.

Abstract in Geol. Centralbl., V, 377.

—— 1903 C

Mylagaulodon, a new rodent from the Upper John Day of Oregon.

Amer. Jour. Sci. (4), XV, 143-144, 1 text-fig.

Abstract in Geol. Centralbl., V, 39.

Sinclair, W. J.—Continued 1904 A

The exploration of the Potter Creek Cave.

Univ. of Calif. Publ. Amer. Arch. Ethn., II, 1-27, pls. i-xiv.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1906, I, Ref., 125-127; Geol. Centralbl., VII, 617-618; Nature, LXXI, 472.

Condensed reprint in Records of the Past, III, 1904, 275-282, figures.

—— 1904 B

Note on fossils found in region of Main Walker River, Nevada.

Bull. Dept. Geol. Univ. Calif., IV, 10-11.

—— 1905 A

New or imperfectly known rodents and ungulates from the John Day series.

Bull. Dept. Geol. Univ. Calif., IV, 125-143, pls. xiv, xviii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 303-305; Geol. Centralbl., VIII, 374; Rev. crit. Paléozool., X, 199.

—— 1905 B

New Mammalia from the Quaternary caves of California.

Bull. Dept. Geol. Univ. Calif., IV, 145-161, pls. xix, xxiii.

Abstract in Geol. Centralbl., VIII, 372; Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 298-299.

—— 1905 C

The marsupial fauna of the Santa Cruz beds.

Proc. Amer. Philos. Soc., XLIV, 73-81, pls. i, ii.

Abstract in Neues Jahrb. Min. Geol. Pal., 1907, I, 306-309.

—— 1905 D

Mammalia of the Santa Cruz beds: Edentata, Insectivora, Glires.

Princeton Univ. Exped. Patagonia, 1896-1899, V, i-xi; 1-499, pls. i-lxxi, 49 text-figs.

Pages 1-106, pls. i-xvi, were published July 15, 1903; pages 107-226, pls. xvii-xxxv, Nov. 4, 1903; pages 227-364, pls. xxxvi-lxiii, Sept. 5, 1904; pages 365-499, pls. lxiv-lxxi, July 25, 1905. The bibliography is to be found on pages 487-489.

Reviewed in Nature, LXXV, 498-499.

Abstract in Sci. Progress, I, 449.

—— 1906 A

Some edentate-like remains from the Mascall beds of Oregon.

Bull. Dept. Geol. Univ. Calif., V, 65-66, 3 text-figs.

Abstract in Geol. Centralbl., XII, 387.

Sinclair, W. J.—Continued 1906 B

Mammalia of the Santa Cruz beds: Marsupialia.

Princeton Univ. Exped. Patagonia, 1886-1899, IV, pt. 3, 333-460, pls. xl-lxv, 9 text-figs.

The extensive bibliography occupies pages 325-332.

Reviewed in Nature, LXXV, 498.

——— 1908 A

Recent investigations bearing on the question of the occurrence of Neocene man in the auriferous gravels of the Sierra Nevada.

Univ. Calif. Publ. Amer. Arch. Ethn., VII, 107-131, pls. xiii, xiv.

Abstract in Geol. Centralbl., XII, 217.

——— 1910 A

Dermal bones of *Paramylodon* from the asphaltum deposits of Rancho La Brea, near Los Angeles, California.

Proc. Amer. Philos. Soc., XLIX, 191-195, 1 text-fig.

Abstracts in Nature, LXXXIII, 505; Sci. Progress, V, 674.

——— 1910 B

The restored skeleton of *Leptauchenia decora*.

Proc. Amer. Philos. Soc., XLIX, 196-199, 1 text-fig.

Abstracts in Geol. Centralbl., XV, 650; Sci. Progress, V, 670.

——— 1912 A

Symposium on ten years progress in vertebrate paleontology. Contributions to geologic theory and method by American workers in vertebrate paleontology.

Bull. Geol. Soc. Amer., XXIII, 262-266.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Lull, Hay, Merriam, Dean, Eastman, Osborn, and Williston.

——— 1914 A

A revision of the bunodont Artiodactyla of the Middle and Lower Eocene of North America.

Bull. Amer. Mus. Nat. Hist., XXXIII, 267-295, 28 text-figs.

Abstracts in Rev. crit. Paléozool., XXI, 53; Geol. Zentralbl., XXVII, 222.

——— 1915 A

Additions to the fauna of the Lower Pliocene Snake Creek beds (Results of the Princeton University 1914 expedition to Nebraska).

Proc. Amer. Philos. Soc., LIV, 73-95, 18 text-figs.

Abstract in Science (n.s.), XLI, 839-840.

Sinclair, W. J.—Continued 1917 A

A new labyrinthodont from the Triassic of Pennsylvania.

Amer. Jour. Sci. (4), XLIII, 319-321, 1 text-fig.

Brief abstracts in Bull. Geol. Soc. Amer., XXVIII, 212; Geol. Zentralbl., XXV, 44.

——— 1918 A

A large parasuchian from the Triassic of Pennsylvania.

Amer. Jour. Sci. (4), XLV, 457-462, text-figs. 1-10.

Abstract in Geol. Zentralbl., XXV, 43.

——— 1921 A

The "turtle-Oreodon" layer, or "red layer." A contribution to the stratigraphy of the White River Oligocene.

Proc. Amer. Philos. Soc., LX, 457-466, pl. vii.

——— 1921 B

A new *Hoplophoneus* from the Titanotherium beds.

Proc. Amer. Philos. Soc., LX, 96-98, fig. 1.

Abstract in Rev. crit. Paléozool., XXVII, 212.

——— 1921 C

Entelodonts from the big Badlands of South Dakota in the Geological Museum of Princeton University.

Proc. Amer. Philos. Soc., LX, 467-495, 22 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1923, I, 319.

——— 1922 A

Hyracodons from the Big Badlands of South Dakota. The small entelodonts of the White River Oligocene.

Science (n.s.), LV, 654 (Abstract).

Abstract in Rev. crit. Paléozool., XXVII, 212.

——— 1922 B

The small entelodonts of the White River Oligocene.

Proc. Amer. Philos. Soc., LXI, 53-64, 5 figs.

Abstract in Rev. crit. Paléozool., XXVII, 211.

——— 1922 C

Hyracodons from the Big Badlands of South Dakota.

Proc. Amer. Philos. Soc., LXI, 65-79, 8 figs.

——— 1924 A

The faunas of the concretionary zones of the Oreodon beds, White River Oligocene.

Proc. Amer. Philos. Soc., LXIII, 93-133, 10 figs.

Sinclair, W. J.—Continued 1925 A

The mounted skeleton of a new *Mesohippus* from the Protoceras beds.

Proc. Amer. Philos. Soc., LXIV, 55-63, pl. iii.

——, and E. L. **Furlong** 1904 A

Euceratherium, a new ungulate from the Quaternary caves of California.

Bull. Dept. Geol. Univ. Calif., III, 411-418, pls. 50, 51, 1 text-fig.

Abstracts in Geol. Centralbl., VII, 426; Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 469-470; Geol. Mag. (5), I, 465.

——, and W. **Granger** 1911 A

Eocene and Oligocene of the Wind River and Bighorn basins.

Bull. Amer. Mus. Nat. Hist., XXX, 83-117, pls. iv-ix, 4 text-figs.

Abstract in Geol. Centralbl., XX, 694.

—— —— 1911 B

Eocene and Oligocene of the Wind River and Big Horn basins.

Bull. Geol. Soc. Amer., XXII, 722-723 (Abstract).

—— —— 1912 A

Notes on the Tertiary deposits of the Big-Horn basin.

Bull. Amer. Mus. Nat. Hist., XXXI, 57-67, pls. v, vi, 2 text-figs.

—— —— 1914 A

Paleocene deposits of the San Juan basin, New Mexico.

Bull. Amer. Mus. Nat. Hist., XXXIII, 297-316, pls. xx-xxvii, 2 sheets presenting sections.

Abstract in Jour. Geol., XXIV, 305.

——, and G. L. **Jepsen** 1927 A

The skull of *Eusmilus*.

Proc. Amer. Philos. Soc., LXVI, 391-407, 8 figs.

Sippel, W. 1907 A

Das Munddach der Vögel und Säuger.

Morphol. Jahrb., XXXVII, 490-524, 1 plate, 12 text-figs.

This paper is preceded by a note and followed by another by A. Fleischman. There is a bibliography of 8 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 82.

Sirena, Santa 1872 A

Über den Bau und die Entwicklung der Zähne bei den Amphibien und Reptilien.

Verh. phys.-med. Ges. Würzb. (N.F.), II, 124-144, pl. xi.

Sisson, Septimus 1910 A

A text-book of veterinary anatomy.

8vo., 1-826 pages, 588 ills.

The osteology occupies pages 19-168, figs. 1-317, and concerns that of the horse, the ox, the pig and the dog.

Sixta, V. 1899 A

Vergleichend-osteologische Bemerkung über den Schultergürtel des *Ornithorhynchus paradoxus* und der Eidechse *Uromastix spinifer*.

Zool. Anz., XXII, 329-336.

—— 1900 A

Vergleichend-osteologische Untersuchung über den Bau des Schädels von Monotremen und Reptilien.

Zool. Anz., XXIII, 213-229, 3 text-figs.

—— 1900 B

Der Monotremen- und Reptilien-Schädel.

Zeitschr. Morphol. Anthrop., II, 1900, 323-364, 13 text-figs.

—— 1901 A

Vergleichend-osteologische Untersuchung über den Bau der Füsse der Reptilien, Monotremen und Marsupialier. Mit kurzer Übersicht der neuren Litteratur, betreffend die anatomischen Beziehungen zwischen den Reptilien, Monotremen und Mammaliern.

Zool. Anz., XXIV, 321-332.

—— 1905 A

Über den Ursprung der Säugetiere (Mammalia).

Zool. Anz., XXVIII, 671-678.

Note on in Knowledge, II, 608.

Skinner, M. P. 1922 A

The prong-horn.

Jour. Mamm., III, 82-105, pls. vi-ix, 1 text-fig.

The bibliography presents 23 titles.

Skoda, K. 1912 A

Anatomische Untersuchungen an einem Fall von Dydaktylie beider Schultergliedmassen beim Pferd.

Anat. Anz., XLI, 417-434, 5 text-figs.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 178.

Slade, D. D. 1887 A

Osteological note.

Science (o.s.), IX, 460.

On rudimetary metacarpals in Bison.

Sloan, Earle 1908 A

Catalogue of the mineral localities of South Carolina.

Bull. Carol. Geol. Surv. (4), II, 1-505, pls. i-x; text-figs. 1-18, and a geognostic map.

Slonaker, James Rollin 1920 A

Some morphological changes for adaptation in the mole.

Jour. Morphol., XXXIV, 335-365, pls. i-iv.

The bibliography occupies pages 364, 365.

Smalian, C. 1885 A

Beiträge zur Anatomie der Amphisbæniden.

Zeitschr. wiss. Zool., XLII, 126-202, pls. v, vi.

In the bibliography are 34 titles.

Smallwood, W. M. 1903 A

The remains of bear and deer on the shores of Onondaga Lake.

Science (n.s.), XVIII, 26-27.

Smith, Bertram G. 1907 A

The life history and habits of *Cryptobranchus allegheniensis.*

Biol. Bull., XIII, 5-39, 14 figs.

There is a bibliography of 22 titles.

Smith, Burnett 1909 A

Note on the Miocene drum fish—*Pogonias multidentatus* Cope.

Amer. Jour. Sci. (4), XXVIII, 275-282, 13 text-figs.

Abstract in Geol. Centralbl., XV, 218.

——— 1909 B

On some dinichthyid armor plates from the Marcellus shale.

Amer. Naturalist, XLIII, 588-597, 3 text-figs.

Abstract in Geol. Centralbl., XIV, 342.

——— 1910 A

Notes on some little-known fishes from the New York Devonian.

Proc. Acad. Nat. Sci. Phila., LXII, 656-663, 2 text-figs.

Abstracts in Geol. Centralbl., XVII, 336; Sci. Progress, V, 692.

——— 1914 A

A new locality for *Castoroides.*

Amer. Jour. Sci. (4), XXXVIII, 463-466, 1 text-fig.

——— 1914 B

A review of the mammalian remains from the superficial deposits in the vicinity of Onondaga lake, New York.

Bull. N. Y. State Mus., CLXXI, 64-72, pls. 1-2.

Smith, Dwight T. 1904 A

The geology of the upper region of the Main Walker River, Navada.

Bull. Dept. Geol. Univ. Calif., IV, 1-32, pls. i-iv.

Smith, E. A. 1894 A

Report on the geology of the coastal plain of Alabama.

Geol. Surv. Ala., 1894, i-xxiv+1-759 pages, illustrations.

Smith, G. Elliot 1903 A

The brain of the Archæoceti.

Proc. Roy. Soc. Lond., LXXI, 322-331, 4 text-figs.

Abstract in Geol. Centralbl., VI, 238.

——— 1903 B

The brain of the Archæoceti.

Jour. Comp. Neur., XIII, 41-52, pls. i, ii, 4 text-figs.

——— 1907 A

On the form of the brain in the extinct lemurs of Madagascar, with some remarks on the affinities of the Indrisinæ.

Trans. Zool. Soc. Lond., XVIII, 163-177, text-figs. 53-63.

This paper forms an appendix to one by H. F. Standing (Standing, H. F., 1907 A) on recently discovered subfossil Primates from Madagascar.

——— 1907 B

On the relationship of lemurs and apes.

Nature, LXXVI, 7-8.

See Standing, H. F., 1907 B.

——— 1911 A

The origin of mammals.

Nature, LXXXVIII, 293-294.

——— 1912 A

Discussion on the origin of mammals.

Rep. Brit. Assoc. Adv. Sci., LXXXI, Portsmouth, 1911, 424-428.

——— 1913 A

The evolution of man.

Rep. Smithson. Instn. for 1912, 553-572.

——— 1915 A

Pre-Columbian representations of the elephant in America.

Nature, XCVI, 340-341, 1 fig.; 425, 501, 593, figs.

——— 1916 A

Pre-Columbian representations of the elephant in America.

Nature, XCVI, 593-595, figs. 2, 3.

——— 1916 B

Further notes on pre-Columbian representations of the elephant in America.

Mem. Manchester Soc. (Proc.), LX, xx-xxiii pages.

Smith, G. Elliot—Continued 1920 A

Discussion on the zoological position and affinities of *Tarsius.*

Proc. Zool. Soc. Lond., 1919 (1920), 465-475, 1 fig.

—— 1922 A

Hesperopithecus: The ape-man of the western world.

London News, June 24, 1922, page 944 with figures. On the two preceding pages is a restoration of the creature by Forestier.

Smith, George L. 1915 A

The paleontology and stratigraphy of the Upper Carboniferous of Iowa.

Proc. Iowa Acad. Sci. XXII, 273-283.

Smith, George Otis 1903 A

Description of the Ellensburg quadrangle.

Folio U. S. Geol. Surv., LXXXVI, 1-7, maps.

—— 1904 A

Description of the Mount Stuart quadrangle.

Folio, U. S. Geol. Surv., CVI, 1-10, maps.

Smith, Hugh M. 1916 A

Sharks—man eaters and others.

Amer. Mus. Jour., XVI, 341-355, 24 illustrations.

Smith, J. Hays 1900 A

Fish four-million years old.

Metrop. Mag., XII, 498-506, 8 illustrations.

Smith, James P. 1894 A

The metamorphic series of Shasta County, California.

Jour. Geol., II, 589-612.

—— 1910 A

The geologic record of California.

Jour. Geol., XVIII, 216-227.

Smith, L. H. 1901 A

The extinction of the elk in Ontario.

Ottawa Naturalist, XV, 95-97, 1 text-fig.

Smith, Lucy Wright 1914 A

The origin and development of the columella auris in *Chrysemys marginata.*

Anat. Anz., XLVI, 547-560, 9 text-figs.

Smith, Nathan 1820 A

Fossil bones found in red sandstone.

Amer. Jour. Sci. (1), II, 146-147.

Followed by a note of the editor.

Smith, Warren Dupre, and Earl L. **Packard** 1919 A

The salient features of the geology of Oregon.

Jour. Geol., XXVII, 79-120, pl. i, 3 figs., 1 table.

There is a bibliography of 60 titles.

Smith, W. Ramsay 1908 A

The evolution of man's teeth, founded upon a study of the development of the teeth of the Australian aboriginal.

Jour. Anat. Physiol. Lond., XLII, 126-131. See also pages 226-235.

Smith, W. S. Tangier 1900 A

A topographic study of the islands of southern California.

Bull. Dept. Geol. Univ. Calif., II, 179-230, pl. v, 4 text-figs.

Snow, F. H. 1878 A

On the dermal covering of a mosasauroid reptile.

Trans. Kansas Acad. Sci., VI, 54-58, 1 pl., 1 text-fig.

Also in Kansas City Rev. Sci. Indust., II, 451-454.

—— 1887 A

On the discovery of a fossil bird-track in the Dakota sand-stone.

Abstract in Amer. Naturalist, XXII, 1888, 50.

Trans. Kan. Acad. Sci., X, 3-6, 1 text-fig.

Sörensen, W. 1894 A

What is, according to our present knowledge, the function of the Weberian ossicles.

Jour. Anat. Physiol. Lond., XXIX, 109-139, 3 figs.

—— 1895 A

What is, according to our present knowledge, the function of the Weberian ossicles?

Jour. Anat. Physiol. Lond., XXIX (n.s. IX), 204-243, 399-423, 518-552, 14 figs.

—— 1897 A

Some remarks on Dr. Thilo's memoir on "Die Umbildungen an den Gliedmassen der Fische."

Morphol. Jahrb., XXV, 170-189, 6 text-figs.

Soergel, Wolfgang 1911 A

Die Pferde aus der Schotterrasse von Steinheim a. d. Murr.

Neues Jahrb. Min. Geol. Pal., Beil. Bd., XXXII, 740-761, pls. xxxiii-xxv..

Soergel, Wolfgang—Continued 1913 A

Elephas trogontherii Pohl. und *Elephas antiquus* Falc., ihre Stammesgeschichte und ihre Bedeutung für die Gliederung des deutschen Diluviums.

Palaeontogr., LX, 1-114, pls. i-iii, 8 tables, 14 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, I, Ref., 350-351; Geol. Centralbl., XX, 314-316; Zeitschr. u. Abstamm. u. Vererb.-Lehre, X, 172-174; Rev. crit. Paléozool., XVII, 207-209; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 213.

—— 1914 A

Stegodonten aus den Kendenschichten auf Java.

Palaeontogr., Suppl. IV, III Abt., I, Lief., 1-24, pls. i, ii.

—— 1915 A

Die Stammesgeschichte der Elephanten.

Centralbl. Min. Geol. Pal., 1915, 179-188, 208-215, 245-253, 278-284.

Abstract in Geol. Zentralbl., XXII, 126.

—— 1915 B

Das vermeintliche Vorkommen von *Elephas planifrons* in Niederösterreich.

Palaeont. Zeitschr., II, 1-65, 12 figs.

—— 1921 A

Elephas columbi Falconer. Ein Beitrag zur Stammesgeschichte der Elefanten und zum Entwicklungsmechanismus des Elefantengebisses.

Geol. Pal. Abh. Jena, XVIII (N.F. XIV), 1-100, pls. i-viii, 6 text-figs.

The cited literature includes 42 titles.

Sokolowsky, Alexander 1904 A

Die Variationen der Schuppenbildung des Kopfes, von *Scincus officinalis*.

Biol. Centralbl., XXIV, 754-761, 4 figs.

—— 1908 A

Neues aus der Biologie der Walrosse.

Sitz.-Ber. Ges. naturf. Freunde Berlin, 1908, 237-253, 5 text-figs.

—— 1909 A

Biologische Beobachtungen über Walrosse.

Aus der Natur, IV, Heft 20, 636-639.

—— 1919 A

Zur Biologie und Stammesgeschichte des Katzenbären (*Ailurus fulgens* F. Cuv.).

Zool. Anz., L, 238-244.

Solger, B. 1879 A

Die Seitenorgane von *Chimæra*.

Arch. mikr. Anat. Bonn, XVII, 95-113, pl. vii.

—— 1880 A

Die Seitenorgane der Knochenfische.

Arch. mikr. Anat. Bonn, XVIII, 364-390, pl. xvii.

—— 1880 B

Die Seitenorgane der Selachier.

Arch. mikr. Anat. Bonn, XVII, 458-479, pl. xxxix.

Sollas, Ignera B. J., and W. J. **Sollas** 1913 A

Note on the dicynodont vomer.

Nature, XCII, 61.

—— —— 1914 A

A study of the skull of a *Dicynodon*, by means of serial sections.

Phil. Trans. Roy. Soc. Lond., CCIV, 201-223, pls. xvii, xviii, 9 text-figs.

Published separately Oct. 30, 1913.

There are numerous references in footnotes to the literature of the subject.

—— —— 1916 A

On the structure of the dicynodont skull.

Phil. Trans. Roy. Soc. Lond., CCVII, B, 531-539, pls. xxxv, xxxvi.

Sollas, W. J. 1916 A

The skull of *Ichthyosaurus* studied in serial sections.

Phil. Trans. Roy. Soc. Lond. (B), CCVIII, 63-126, 1 pl., 22 text-figs.

Abstract in Rev. crit. Paléozool., XXVI, 93.

Review in Geol. Mag. (6), III, 571.

—— 1918 A

Note on *Lysorophus*.

Ann. Mag. Nat. Hist. (9), II, 239-240, figs. 4, 5.

—— 1920 A

On the structure of *Lysorophus*, as exposed by serial sections.

Phil. Trans. Roy. Soc. Lond. (B), CCIX, 481-527, pl. lxx, 44 text-figs.

Abstract in Rev. crit. Paléozool., XXVI, 93.

——, and I. B. J. **Sollas** 1903 A

An account of the Devonian fish, *Palæospondylus gunni* Traquair.

Philos. Trans. Roy. Soc. Lond., CXCVI, 267-294, pls. xvi, xvii.

The bibliography presents 28 titles.

Sonies, F. 1907 A
Ueber die Entwickelung des Chondrocraniums und der knorpeligen Wirbelsäule bei den Vögeln.
Petrus Camper, Bijdr. Anat., Haarlem, IV, 395-486, pls. vii-x.
On pages 478-480 is a bibliography of 44 titles.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 84.

Sonntag, C. F. See **Clark** and **Sonntag.**

Southall, James C. 1875 A
The recent origin of man, as illustrated by geology and the modern science of prehistoric archæology.
8vo., 1-606 pages, with illustrations.

—— 1878 A
The epoch of the mammoth and the apparition of man upon the earth.
London, 8vo., i-xv+1-430 pages, illustrations.
Reviewed in Geol. Mag., London (2), v, 356-360; Nature, XVIII, 245-246.

Southwell, T., and S. F. **Harmer** 1893 A
Notes on a specimen of Sowerby's whale (*Mesoplodon bidens*), stranded on the Norfolk coast.
Ann. Mag. Nat. Hist. (6), XI, 275-284, pl. XV.
The literature is cited in foot-notes.

Spencer, J. W. 1883 A
Surface geology of the region about the western end of Lake Ontario.
Canad. Naturalist (n.s.), X, 213-236, 265-312.

—— 1895 A
Reconstruction of the Antillean continent.
Jour. Geol., VI, 103-140, pl. i.

—— 1898 A
The West Indian bridge between North and South America.
Pop. Sci. Month., LIII, 10-30, pls. i-iv, 9 text-figs.

Spencer, W. Baldwin 1886 A
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Abstracts in Zeitschr. Morph. Anthrop., XVII, 449; Geol. Centralbl., XVIII, 516-518; Neues Jahrb. Min. Geol. Pal., 1913, I, Ref., 157-158; Rev. crit. Paléozool., XVII, 1-4; Geol. Mag. (5), X, 37.

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——— 1913 A

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Neues Jahrb. Min. Geol. Pal., 1913, II, 49-68, pls. iii-v.

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——— 1915 A

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Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 131-138.

——— 1915 B

Ergebnisse der Forschungsreisen Prof. E. Stromers in den Wüsten Ägyptens. II: Das Original des Theropoden *Spinosaurus*.

Abh. Bayer. Akad., XXVIII, art. 3, 1-32, pls. i-ii.

The bibliography presents 30 titles.

——— 1916 A

Die Entdeckung und die Bedeutung der Land und Süsswasser bewohnenden Wirbeltiere im Tertiär und in der Kreide Aegyptens.

Zeitschr. deutsch. Geol. Ges., LXVIII, 397-425.

The bibliography comprises 51 titles.

Stromer, E.—Continued 1917 A

Ergebnisse der Forschungsreisen Prof. Stromers in den Wüsten Ägyptens.

Die Säge des Pristiden *Onchopristis*.

Abh. Bayer. Akad., XXVIII, art. 8, 1-21, 1 plate.

There are 38 titles in the bibliography.

Abstract in Geol. Zentralbl., XXIII, 283.

—— 1917 B

Die Säge des Pristiden *Onchopristis numidus* Haug sp. und über die Sägen der Sägehaie.

Sitz.-Ber. Akad. Wiss. München, 1917, 1*-2*.

—— 1920 A

Bemerkungen über die ältesten bekannten Wirbeltier-Reste.

Sitz-Ber. Akad. Wiss. München, 1920, 9-20.

The bibliography consists of 33 titles.

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—— 1921 A

Untersuchung der Hüftbeine und Hüftgelenke von Sirenia und Archæoceti.

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There is a bibliography of 24 titles.

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—— 1923 A

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Abh. Bayer. Akad., XXX, Abh. VI, 1-22, 1 double plate.

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Stromer, E.—Continued 1925 B

Der Rückgang der Ganoidfische von der Kreidezeiten.

Zeitschr. deutsch. Geol. Ges., LXXVII, 348-371.

The bibliography presents 56 titles.

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—— 1926 A

Reste Land- und Süsswasser-Bewohnender Wirbeltiere aus den Diamantfeldern Deutsch-Südwestafrikas.

Extract from Erich Kaiser's Die *Diamantwüste Südwestafrikas*, II, 107-153.

——, and B. **Peyer** 1917 A

Über rezente und triassische Gebisse von Ceratodontidæ.

Zeitschr. deutsch. Geol. Ges., LXIX, 1-80, pls. i-iv, 6 text-figs.

There are 52 titles in the bibliography.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1919, I, 111-112; Geol. Zentralbl., XXIV, 445.

Strong, E. A. 1872 A

Notes upon the fossil remains of the Lower Carboniferous limestone exposed at Grand Rapids, Mich.

Kent Scient. Inst. Misc. Papers, No. 3, 1-6.

Strong, R. M. 1921 A

The order, time, and rate of ossification of the vertebrate skeleton.

Anat. Record, XX, 203.

Struck, Wilhelm 1915 A

Die Befestigung der Zähne im Bereich der Wirbelthierreihe.

Deutsche Monatsschr. Zahnheilk., XXXIII, 135-143, 12 figs.

Strüver, Johannes 1864 B

Beschreibung des *Heterodontus phillipii* Bl. (*Cestracion phillipii Cuv.*), mit Rücksicht auf seine fossile Verwandten.

Nov. Act. Acad. Leop. Carol., XXXI, Abh., 1-32, pls. i. ii.

Struthers, J. 1885 C

On the rudimentary hind-limb of the Tay whale, *Megaptera longimana*.

Rep. Brit. Assoc. Adv. Sci., LIV, Montreal, 766.

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—— 1888 A

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For review of these papers, published in book form in 1889, see Ann. Mag. Nat. Hist. (6), V, 413-416.

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Rep. Brit. Assoc. Adv. Sci., LXIV, Oxford, 684-685.

—— 1895 A
On the characters and some parts of the anatomy of a *Beluga* (*Delphinapterus leucas*).
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Studer, Th. 1901 A
Die praehistorischen Hunde in ihrer Beziehung zu den gegenwärtig lebenden Rassen.
Abh. Schweiz. pal. Ges., XXVIII, 1-137, pls. i-ix, 18 text-figs.
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—— 1906 A
Ueber südamerikanische Caniden des Naturhistorischen Museums in Bern.
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Stur, D. 1886 A
Vorlage des ersten fossilen Schädels von *Ceratodus* aus den obertriadischen Reingrabner Schiefern von Pölzberg nördlich bei Lunz.
Verh. geol. Reichsanst. Wien, 1886, 381-383.

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Zur Osteologie des Lama (*Auchenia lama*).
Anat. Anz., LXII, 97-109.

Suess, E. 1868 A
Neue Reste von *Squalodon* aus Linz.
Jahrb. geol. Reichsanst. Wien, XVIII, 287-290, pl. x.

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On the wings of birds.
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Supino, Felice 1904 A
Il cranio dei Teleostei in rapporto al loro genere di vita.
Atti Accad. Lincei, Rev. (5), XIII, 625-631.

Sushkin, Peter P. 1896 A
Zur Anatomie und Entwickelungsgeschichte des Schädels der Raubvögel.
Anat. Anz., XI, 767-768.
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Sushkin, Peter P.—Continued 1899 A
Beiträge zur Classification der Tagraubvögel mit Zugrundelegung der osteologischen Merkmale.
Zool. Anz., XXII, 500-518.

—— 1899 B
Zur Morphologie des Vogelskelets. I: Schädel von *Tinnunculus*.
Nouv. Mém. Soc. Nat. Moscou, XVI (XXI), liv. 2, 1-163, pls. i-vi.

—— 1900 A
Systematische Ergebnisse osteologischer Untersuchungen einiger Tagraubvögel.
Zool. Anz., XXIII, 269-277.

—— 1900 B
Weitere systematische Ergebnisse vergleichend-osteologischer Untersuchungen der Tagraubvögel.
Zool. Anz., XXIII, 522-528.

—— 1905 A
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—— 1910 A
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—— 1925 A
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Occ. Papers Bost. Soc. Nat. Hist., V, 179-181, 6 figs.

—— 1925 B
Taxonomical results of studies of the Fringillidæ.
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On the modifications of the mandibular and hyoid arches and their relations to the brain-case in the early Tetrapoda.
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Observations on the parasphenoid, the vomer, and the palato-pterygoid arcade.

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On the natural history and classification of birds.

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—— 1838 A

The cabinet of natural history. Fishes, amphibians, and reptiles.

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Swallow, G. C. 1858 A

Quaternary deposits of Missouri.

Proc. Amer. Assoc. Adv. Sci., XI, pt. II, 21-39.

Swarth, H. S. 1915 A

Guide to the exhibit of fossil animals from Rancho La Brea.

Los Angeles Mus. Hist. Sci. Publ., No. 1, 1-34, illustrated.

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Swartz, Charles K. 1913 A

Vertebrata [of Upper Devonian of Maryland].

Maryland Geol. Surv. Middle and Upper Devonian, 700-701, pl. lxxiii.

Swingle, Walter F. 1925 A

Letter written in 1906 to Dr. Charles D. Walcott concerning a tibia of a ground-sloth found in San Francisco, in 1852.

Publ. Carnegie Instn. Wash., No. 331, 201-202.

Swinnerton, H. H. 1902 A

A contribution to the morphology of the teleostean head skeleton, based upon a study of the developing skull of the three-spined stickleback (*Gasterosteus aculeatus*).

Quart. Jour. Micr. Sci. (n.s.), XLV, 503-593, pls. xxviii-xxxi, 5 text-figs.

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Swinnerton, H. H.—Continued 1905 A

The changes and variations in the position of the pectoral fin during development.

Ann. Mag. Nat. Hist. (7), XV, 319-321, 2 figs.

—— 1905 B

A contribution to the morphology and development of the pectoral skeleton of teleosteans.

Quart. Jour. Micr. Sci. (n.s.), XLIX, 363-383, pl. xxiii, 3 text-figs.

There is a bibliography of 18 titles.

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—— 1911 A

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Sci. Progress, V, 447-456, 15 figs.

—— 1925 A

A new catopterid fish from the Keuper of Nottingham.

Quart. Jour. Geol. Soc., LXXXI, 87-99, pls. vii, viii, 3 text-figs.

Symington, Johnson 1892 A

On the nose, the organ of Jacobson, and the dumb-bell shaped bone in the Ornithorhynchus.

Proc. Zool. Soc. Lond., 1891 (1892), 575-584, pls. xliii, xliv.

The bibliography presents 17 titles.

—— 1905 A

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Jour. Anat. Physiol. Lond., XL, 100-109, 2 text-figs.

Abstracts in Nature, LXXIII, 1906, 304; Jahresber. Anat. Entwickl. (N.F.), XII, pt. 3, 119.

Symonds, W. S. 1884 A

Fish-remains in the North American Silurian rocks.

Science (o.s.), IV, 159.

Szalay, Elemér L. 1902 A

Comparative Osteologie der Brust-Schulterapparate von *Anser fabalis* (Lath. 1823) und *neglectus* (Sushk. 1897), *Larus ridibundus* (1758) and *canus* (L. 1758).

Aquila, IX, 12-29, pls. i-iii.

Text in Hungarian and German.

Szily, Aurel 1907 A

Die einleitenden Vorgänge zur Bildung der knöchernen Flossenstrahlen in der Schwanzflosse bei der Forelle, zugleich ein Beitrag zur Phylogenese dieser Hartgebilde.

Anat. Anz., xxxi, 347-364, 8 figs.

There is a bibliography of 12 titles.

Abstract in Jahresber. Anat. Entwickl. (N.F.), xiii, pt. 3, 119-120.

Taets, Walter 1913 A

Untersuchungen am Schädel des Haushundes.

Arch. Naturges, lxxix, Abt. A, 5-78.

There is a bibliography of 75 titles.

Talbot, Mignon 1911 A

Podokesaurus holyokensis, a new dinosaur from the Triassic of the Connecticut Valley.

Amer. Jour. Sci. (4), xxxi, 469-479, pl. iv, 6 text-figs.

Abstracts in Geol. Centralbl., xvii, 42; Neues Jahrb. Min. Geol. Pal., 1912, i, Ref., 138; Sci. Progress, vi, 571.

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Tarapani, Helena 1909 A

Die Entwickelungsgeschichte des Hyobranchialskelettes von *Salamandra atrata* Laur. und *Triton alpestris* Laur.

Jena. Zeitschr. Naturwiss., xlv (N.F., xxxviii), 59-110, pls. iv-ix.

There are 26 titles in the bibliography.

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Tarr, Ralph 1909 A

Quaternary system [of the Watkins Glen-Catatonk quadrangle, N. Y.].

Folio U. S. Geol. Surv., clxix, 15-28 (Field edition, 111-201).

Taschenberg, Otto 1894 A

Bibliotheca Zoologica. II: Verzeichniss der Schriften über Zoologie welche in dem periodischen Werken enthalten und vom Jahre 1861-1880 selbständig erschienen sind. Mit Einschluss der allgemein-naturgeschichtlichen, periodischen und palaeontologischen Schriften.

4ter Band, i-iv+2761-3648 pages.

——— 1899 A

Same title as the preceding.

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The Champlain submergence and uplift, and their relation to the Great Lakes and Niagara Falls.

Rep. Brit. Assoc. Adv. Sci., lxvii, Toronto, 1907, 652-653.

Taylor, Frank B.—Continued 1915 A

The Pleistocene of Indiana and Michigan and the history of the Great Lakes.

Mon. U. S. Geol. Surv., liii, 238-279, 281-301, 316-349, 358-518, with maps and figures.

The monograph is the joint work of Frank Leverett and Frank B. Taylor.

Taylor, Harden F. 1916 A

The structure and growth of the scales of the squeteague and the pigfish as indicative of life history.

Bull. U. S. Bur. Fish., xxxiv, 285-330, pls. l-lix, 8 text-figs.

The important bibliography occupies pages 325-330.

Taylor, Jay L. B. 1921 A

Did the Indian know the mastodon?

Nat. Hist., xxi, 591-597, with illustrations.

Taylor, W. P. 1911 A

A new antelope from the Pleistocene of Rancho La Brea.

Bull. Dept. Geol. Univ. Calif., vi, 191-197, 6 text-figs.

Review in Rev. crit. Paléozool., xvi, 84.

Abstract in Geol. Centralbl., xvii, 38.

——— 1911 B

Mammals of the Alexander Nevada expedition of 1909.

Univ. Calif. Publ. Zool., vii, 205-307.

——— 1912 A

The beaver of west central California.

Univ. Calif. Publ. Zool., x, 167-169.

——— 1914 A

The problem of aquatic adaptation in the Carnivora, as illustrated in the osteology and evolution of the sea-otter.

Bull. Dept. Geol. Univ. Calif., vii, 465-495, 15 text-figs.

Abstracts in Rev. crit. Paléozool., xix, 11; Neues Jahrb. Min. Geol. Pal., 1921, i, Ref., 242-243.

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Outline of the history of the Castoridæ.

Bull. Geol. Soc. Amer., xxvi, 167 (Abstract).

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The status of the beavers of western North America, with a consideration of the factors in their speciation.

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——— 1917 A

Notes on *Aplodontia.*

Jour. Wash. Acad. Sci., vii, 272.

Taylor, W. P.—Continued 1918 A
Revision of the rodent genus *Aplodontia*.
Univ. Calif. Publ. Zool., XVII, 435-504, pls. xxv-xxvi, 16 text-figs.
Pages 484-495 are occupied by the extensive bibliography.

Teilhard de Chardin, P. See **Chardin**, Teilhard de, P.

Teller, Edgar E. 1906 A
Notes on the fossil fish-spine, *Phlyctænacanthus telleri* (Eastman).
Bull. Wis. Nat. Hist. Soc. (n.s.), IV, 162-167, pls. i-v.

—— 1911 A
A synopsis of the type specimens of fossils from the Palaeozoic formations of Wisconsin.
Bull. Wis. Nat. Hist. Soc., IX, 170-271.
The list of fishes occupies pages 270-271.

Tentzel, W. E. 1698 A
Epistola de sceleto elephantino Tonnæ nuper effosso, ad Antonium Magliabechium.
Phil. Trans. Roy. Soc. Lond., XIX, 757-776.

Teppner, Wilfried 1914 A
Zur phylogenetischen Entwicklung der "protriunguiden Trionyciden" des Tertiärs und *Trionyx petersi* R. Hoernes var. *trifailensis* nov. var. aus dem Miocän von Trifail in Steiermark.
Centralbl. Min. Geol. Pal., 1914, 628-638.

Terra, Paul de 1911 A
Vergleichende Anatomie des menschlichen Gebisses und der Zähne der Vertebraten.
Jena, i-v+1-451 pages, 200 text-figs.
The bibliography (pages 388-441) presents about 3,000 titles.

Terry, Robert J. 1906 A
The nasal skeleton of *Amblystoma*.
Trans. Acad. Sci. St. Louis, XVI, 95-124, pls. ii-v.
There is a bibliography of 24 titles.

—— 1909 A
An observation on the development of the mammalian vomer.
Anat. Record, III, 525-529, with 2 figs.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 80.

—— 1917 A
The primordial cranium of the cat.
Jour. Morphol., XXIX, 281-408, pls. i-xiii.
There is a bibliography which comprises 85 titles.

Thacker, A. G. 1914 A
The extinct apes and their bearing upon the antiquity of the Hominidæ.
Sci. Progress, IX, 281-289.

—— 1922 A
The geological history of the Primates.
Sci. Progress, XVI, 595-607.

—— 1923 A
[Note on *Hesperopithecus*.]
Sci. Progress, No. 67, Jan. 1923, 383-385.

Thäter, K. 1910 A
Das Munddach der Schlangen und Schildkröten.
Morphol. Jahrb., XII, 471-518, pls. viii, ix, 38 text-figs.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 82.

Thevenin, Armand 1905 A
Sur la découverte d'amphibiens dans le terrain houllier de Commentry.
C. R. Acad. Sci. Paris, CXLI, 1268-1269.

—— 1906 A
Amphibiens et reptiles du terrain houiller de France.
Ann. Paléont. Paris, I, 145-163, pls. x, xi, 13 text-figs.
Abstract in Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 310-311; Sci. Progress, III, 468; Rev. crit. Paléozool., XI, 14-16.

—— 1907 A
Review of J. C. Merriam's "Carnivora from the Tertiary formations of the John Day region."
Rev. crit. Paléozool., XI, 216.

—— 1907 B
Paléontologie de Madagascar. IV: Dinosauriens.
Ann. Paléont. Paris, II, 121-136, pls. xvii, xviii.

—— 1909 A
Les stades d'évolution des plus anciens quadrupèdes trouvés en France.
C. R. Acad. Sci. Paris, CXLIX, 1222-1227.

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Les plus anciens quadrupèdes de France.
Ann. Paléont. Paris, V, 1-65, pls. i-ix, 36 text-figs.
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—— 1911 A
Le *Dryosaurus* des phosphates de Tunisie.
Ann. Paléont. Paris, VI, fasc., III, 1-16, pls. i-iii, 10 text-figs.

Thilenius, G. 1897 A
Accessorische und echte Skeletstücke.
Anat. Anz., XIII, 483-490.

Thilo, Otto 1879 A
Die Sperrgelenke an den Stacheln einiger Welse, des Stichlinges und des Einhornes.
Inaug.-Dissert. Univ. Dorpat, 1879, 1-22, 1 pl.

—— 1896 A
Die Umbildungen an den Gliedmassen der Fische.
Morphol. Jahrb., XXIV, 287-355, pls. vi-ix, 7 text-figs.
There is a bibliography of 26 titles.
Abstract in Biol. Zentralbl., XVII, 20-29.

—— 1896 B
Die Gliedmassen der Fische.
Korres.-Bl. Ver. Riga, XXXIX, 96-106

—— 1897 A
Die Stacheln der Fische.
Verh. Ges. deutsch. Naturf., LXVIII, 1896, Frankfurt, 171-176.
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—— 1898 A
Die Körperformen der Fische und Seesäugetiere.
Korres.-Bl. Ver. Riga, XL, 138-146, 8 figs.

—— 1898 B
Ergänzungen zu meiner Abhandlung:
"Die Umbildungen an den Gliedmassen der Fische."
Morphol. Jahrb., XXVI, 81-90.

—— 1899 A
Ueber die Vorfahren der Schollen.
Korres.-Bl. Ver. Riga, XLII, 175-179.

—— 1900 A
Ueber die Lebensweise und den Körperbau der Fische.
Korres.-Bl. Ver. Riga, XLIII, 18-21.

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Die Stacheln der Fische als Haftorgane.
Korres.-Bl. Ver. Riga, XLIII, 18-21.

—— 1901 A
Die Vorfahren der Schollen.
Bull. Acad. Sci. St. Pétersb., XIV, 315-350, pls. i, ii, 18 text-figs.
The bibliography presents 30 titles.

—— 1902 A
Die Umbildungen am Knochengerüste der Schollen.
Zool. Anz., XXV, 305-320, 18 figs.
The bibliography comprises 21 titles.

Thilo, Otto—Continued 1902 B
Die Vorfahren der Schollen.
Biol. Zentralbl., XXII, 717-728, 17 text-figs.
There is a bibliography of 17 titles.

—— 1903 A
Die Entstehung der Schwimmblasen.
Biol. Centralbl., XXIII, 528-540.
There is a bibliography of 12 titles.

—— 1908 A
Die Bedeutung der Weber'schen Knöchelchen.
Zool. Anz., XXXII, 777-789, 7 text-figs.

—— 1913 A
Verknöcherte Schwimmblasen.
Zool. Anz., XLI, 289-298, 6 figs.
The bibliography comprises 17 titles.
Abstract in Jahresber. Anat. Entwickl. (N.F.), XIX, pt. 3, 33.

—— 1920 A
Die Entstehung der Augenstellung bei den Schollen.
Zool. Anz., LI, 119-142, 12 figs.
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Thomas, A. O. 1921 A
Notes on a beaver tooth from the Pleistocene of Des Moines, Iowa.
Science (n.s.), LIV, 309.

Thomas, Lyell J. 1926 A
Ossification centers in the petrosal bone of the mouse.
Anat. Record, XXXIII, 59-68, 11 figs.
The bibliography includes 21 titles.

Thomas, Oldfield 1887 A
On the homologies and succession of the teeth in the Dasyuridæ, with an attempt to trace the history of the evolution of mammalian teeth in general.
Proc. Roy. Soc. Lond., XLII, 310-312.

—— 1888 C
Catalogue of the Marsupalia and Monotremata in the collection of the British Museum (Natural History).
i-xiii+1-401 pages, pls. i-xxvii.

—— 1895 A
An analysis of the mammalian generic names given in Dr. C. W. L. Gloger's "Naturgeschichte" (1841).
Ann. Mag. Nat. Hist. (6), XV, 189-193.

—— 1901 A
The generic names *Myrmecophaga* and *Didelphis*.
Amer. Naturalist, XXXV, 143-145.

—— 1902 A
The generic names of the peccaries, northern fur seal, and sea leopard.
Proc. Biol. Soc. Wash., XV, 153-156.

Thomas, Oldfield—Continued 1902 B
On the generic names *Notophorus*, *Alces*, *Dama*, and *Cephalotes*, with remarks on the "one-letter rule" in nomenclature.
Proc. Biol. Soc. Wash., xv, 197-198.

—— 1908 A
The missing premolar of the Chiroptera.
Ann. Mag. Nat. Hist. (8), i, 346-348.

—— 1908 B
The genera and sub-genera of the *Sciuropterus* group, with descriptions of three new species.
Ann. Mag. Nat. Hist. (8), i, 1-8.

—— 1911 A
On certain of the smaller S. American Cervidæ.
Ann. Mag. Nat. Hist. (8), xi, 585-589.

—— 1911 B
The mammals of the tenth edition of Linnæus; an attempt to fix the types of the genera and the exact bases and localities of the species.
Proc. Zool. Soc. Lond., 1911, i, 120-158.

—— 1914 A
On a remarkable case of affinity between animals inhabiting Guiana, W. Africa, and the Malay Archipelago.
Proc. Zool. Soc. Lond., 1914, pt. 2, 415-417.

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—— 1890 G
Observations on some fossil fishes from the Lower Carboniferous rocks of Eskdale, Dumfriesshire.
Ann. Mag. Nat. Hist. (6), VI, 491-494.

—— 1890 H
On the fossil fishes found at Achanarras quarry.
Ann. Mag. Nat. Hist. (6), VI, 479-486, 4 figs.

—— 1893 E
Review of Fritsch's Fauna der Gaskohle (Fritsch, A., 1895 A).
Geol. Mag. (3), X, 175-178.

—— 1898 A
Notes on Palæozoic fishes. No. II.
Ann. Mag. Nat. Hist. (7), II, 67-70, pl. I.

—— 1898 B
On *Cladodus neilsoni* (Traquair), from the Carboniferous limestone of East Kilbride.
Trans. Geol. Soc. Glasgow, XI, 41-50, pl. IV.
Reprints may have been issued in 1897.
Reviewed in Neues Jahrb. Min. Geol. Pa., 1900, I, Ref., 464.

Traquair, Ramsay H.—Cont'd 1899 B

On a new species of *Cephalaspis*, discovered by the Geological Survey of Scotland, in the Old Red Sandstone of Oban.

Trans. Roy. Soc. Edinb., XXXIX, 591-593, 1 plate, 3 text-figs.

Issued separately Feb. 6, 1899.

—— 1899 C

On *Thelodus pagei* Powrie sp. from the Old Red Sandstone of Forfarshire.

Trans. Roy. Soc. Edinb., XXXIX, 595-602, pl. xxxix.

Abstracts in Neues Jahrb. Min. Geol. Pal., I, 1901, Ref., 504-505; Geol. Centralbl., I, 1901; Rev. crit. Paléozool., V, 63.

—— 1899 D

On a new species of *Dipterus*.

Geol. Mag. (3), VI, 97-99, pl. ii.

—— 1900 C

The bearings of fossil ichthyology on the problems of evolution.

Nature, LXII, 502-508.

Published also in Rep. Brit. Assoc. Adv. Sci., 70th meet., 768-783.

This is the same paper as Traquair, R. H., 1900 B.

—— 1901 A

The ganoid fishes of the British Carboniferous formations. Pt. I, No. 2: Palæoniscidæ.

Palaeontogr. Soc. Mon., vol. for 1901, 61-87, pls. viii-xviii, 1 text-fig.

Abstract in Geol. Centralbl., II, 512.

—— 1903 A

The Lower Devonian fishes of Gemünden.

Trans. Roy. Soc. Edinb., XL, 723-739, pls. i-vii, 3 text-figs.

Issued separately 1903; Pt. IV, including it, in 1905.

Abstract in Jahresber. Anat. Entwickl. (N.F.), IX, pt. 3, 148.

—— 1904 A

A monograph of the fishes of the Old Red Sandstone of Britain. Part II, No. 2: The Asterolepidæ.

Paleontogr. Soc. Mon., 1904, 91-118, pls. xix-xxvi, text-figs. 51-61.

A continuation of Traquair, R. H., 1894 C.

—— 1905 A

Notes on the Lower Carboniferous fishes of eastern Fifeshire.

Proc. Roy. Phys. Soc. Edinb., XVI, 80-86, pl. v.

Appeared in Geol. Mag. (4), 1901, 110-114, without figures.

Traquair, Ramsay H.—Cont'd 1905 B

Supplementary report on fossil fishes collected by the Geological Survey of Scotland in the Upper Silurian rocks of Scotland.

Trans. Roy. Soc. Edinb., XL, 879-888, pls. i-iii, 4 text-figs.

—— 1906 A

A monograph of the fishes of the Old Red Sandstone of Britain. Pt. II, No. 3: The Asterolepidæ.

Palaeontogr. Soc. Mon., 1906, 119-134, pls. xxvii-xxxi, text-fig. 6.

A continuation of Traquair, R. H., 1904 A.

—— 1907 A

The ganoid fishes of the British Carboniferous formations. Pt. I, No. 3: Palæoniscidæ.

Palaeontogr. Soc. Mon., vol. for 1907, 87-106, pls. xix-xxiii, 3 text-figs.

A continuation of Traquair, R. H., 1904 A.

—— 1908 A

Report on the fossil fishes collected by the Geological Survey of Scotland from shales exposed on the shore near Gullane, East Lothian.

Trans. Roy. Soc. Edinb., XLVI, 103-117, pls. i-ii, 2 text-figs.

Issued separately Dec. 21, 1907.

—— 1908 B

On fossil fish remains collected by J. S. Flett, M.A., D.Sc., from the Old Red Sandstone of Shetland.

Trans. Roy. Soc. Edinb., XLVI, 321-329, pls. i, ii, 3 text-figs.

Abstract in Geol. Centralbl., XII, 300.

—— 1909 A

The ganoid fishes of the British Carboniferous formations. Pt. I, No. 4: Palæoniscidæ.

Palaeontogr. Soc. Mon., vol. for 1909, 107-122, pls. xxiv-xxx, text-fig. 5.

A continuation of Traquair, R. H., 1907 A.

Abstract in Geol. Centralbl., XVI, 411.

—— 1911 A

Les poissons wealdiens de Bernissart.

Mém. Mus. Hist. nat. Belgique, VI, 1910, 1-65, pls. i-xii, 22 text-figs.

Abstracts in Science (n.s.), XXXV, 306; Jahrb. Min. Geol. Pal., 1911, II, 481-482; Geol. Mag. (5), IX, 84-86, 95.

Traquair, Ramsay H.—Cont'd 1911 B
The ganoid fishes of the British Carboniferous formations. Pt. I, No. 5: Palæoniscidæ.
Palaeontogr. Soc. Mon., vol. for 1910, 123-158, pls. xxxi-xxxv, 3 text-figs.
A continuation of Traquair, R. H., 1909 A.
Abstracts in Geol. Centralbl., XVI, 411; Sci. Progress, VIII, 22.

—— 1912 A
The ganoid fishes of the British Carboniferous formations. Pt. I, No. 6: Palæoniscidæ.
Palaeontogr. Soc. Mon., vol. for 1911, 159-180, pls. xxxvi-xl, 5 text-figs.
A continuation of Traquair, R. H., 1911 B.
Abstract in Geol. Centralbl., XVIII, 140.

—— 1914 A
The ganoid fishes of the British Carboniferous formations. Pt. I, No. 7: Palæoniscidæ.
Palaeontogr. Soc. Mon., vol. for 1913, 181-186, with index.
A continuation of Traquair, R. H., 1912 A.

—— 1914 B
The ganoid fishes of the British Carboniferous formations. Pt. I: Palæoniscidæ.
Palaeontogr. Soc. Mon., vol. for 1913, i-vi.
This includes only the title-page and the index of Traquair's work on the Palæoniscidæ.

T. R. D. 1889 A
Fossil shells and bones.
Amer. Jour. Sci. (3), XXXV, 1839, 380.

Tredgold, A. F. 1897 A
Variations of ribs in the Primates, with especial reference to the number of sternal ribs in man.
Jour. Anat. Physiol. Lond., XXXI, 288-302, 2 pages of figures.

Tretjakoff, D. 1925 A
Das Knochengewebe bei den Pleuronectiden und den Plectognathen.
Anat. Anz., LIX, 379-387, 4 figs.
The bibliography includes 10 titles.

—— 1926 A
Die Zähne der Plectognathen.
Zeitschr. wiss. Zool., CXXVII, 619-644, 10 figs.
The bibliography consists of 12 titles.

Tristram, H. B. 1888 A
The polar origin of life considered in its bearing on the distribution and migration of birds.
Ibis (5), VI, 204-216.

Troedsson, Gustaf T. 1924 F
On crocodilian remains from the Danian of Sweden.
Lund, Univ. Arsskr. (N.F.), XX, No. 2, 1-75, pls. i-viii, 9 text-figs.

Troschel, F. H. 1853 A
Ueber *Heloderma horridum* Wieg.
Arch. Naturges., XIX, Bd. 1, 294-315, pls. xiii, xiv.

Trouessart, E. L. 1878 A
Mémoire sur la distribution géographique des chiroptères comparée à celle des autres mammifères terrestres.
Ann. Sci. Nat. (6), VIII, art. 12, 1-24.

—— 1892 A
The fiction of the American horse and the truth on this disputed point.
Science (o.s.), XX, 188-189.

—— 1897 A
Catalogus Mammalium tam viventium quam fossilium. Nova editio.
Berolini, 1897, 1-664, 8vo.
Contains the orders Primates, Prosimiæ, Chiroptera, Insectivora.
Pagination incorrectly given in Hay, O. P., 1902 A, page 230.

—— 1897 B
Abstract of J. L. Wortman's "The Ganodonta and their relationship to the Edentata. Psittacotherium, a member of a new and primitive suborder of the Edentata."
Rev. crit. Paléozool., I, 86-87.

—— 1898 B
Abstracts of Eastman, C. R., 1897 A, 1897 B, and 1897 C (Hay, O. P., 1902 A, p. 84).
Rev. crit. Paléozool., II, 7, 8.

—— 1903 A
Réapparition du Grand Serpent de mer.
Rev. scient. Paris (4), XIX, 305-306.

—— 1904 A
Catalogus Mammalium tam viventium quam fossilium. Quinquinale supplementum.
Berolini, 1904, i-iv; 1-546.
Contains the orders Bimana, Primates, Prosimiæ, Chiroptera, Insectivora, Carnivora, Pinnipedia, Rodentia.

—— 1905 A
Catalogus Mammalium tam viventium quam fossilium.
Quinquinale supplementum. Pages 547-929.
Contains the orders Ungulata, Sirenia, Cetácea, Edentata, Marsupialia, Allotheria and Monotremata.

Trouessart, E. L.—Continued 1906 A

La distribution géographique des animaux.

Le Naturaliste, XXVIII, 65-66, 210-213.

—— 1907 A

Sur les rapports des lémuriens fossiles de France avec ceux de Madagascar, et sur l'origine diphylétique des lémuriens actuels.

C. R. Soc. Biol., LXII, 125-127.

—— 1913 A

Le cheval existait-il en Amérique à l'epoque de la découverte du Nouveau Continent?

Rev. gén. Sci. Paris, XXIV, 725-729.

Troxell, Edward L. 1915 A

The vertebrate fossils of Rock Creek, Texas.

Amer. Jour. Sci. (4), XXXIX, 613-638, pl. ix, 24 text-figs.

Abstracts in Rev. crit. Paléozool., XXIV, 91-92; Geol. Zentralbl., XXV, 328.

—— 1915 B

A fossil ruminant from Rock Creek, Texas, *Preptoceras mayfieldi* sp. nov.

Amer. Jour. Sci. (4), XL, 479-482, 3 text-figs.

Abstract in Geol. Zentrabl., XXV, 271.

—— 1916 A

An early Pliocene one-toed horse, *Pliohippus lullianus* sp. nov.

Amer. Jour. Sci. (4), XLII, 335-348, 7 text-figs.

Abstracts in Bull. Geol. Soc. Amer., XXVII, 151-152; Geol. Zentralbl., XXV, 270.

—— 1916 B

Oligocene fossil eggs.

Jour. Wash. Acad. Sci., VI, 422-425, text-figs. 1-5.

Abstract in Geol. Zentralbl., XXV, 539.

—— 1917 A

Fossil hunting in Texas.

Scient. Monthly, IV, 81-89, figs. 1-9.

—— 1917 B

An Oligocene camel, *Pœbrotherium andersoni* n. sp.

Amer. Jour. Sci., XLIII, 381-389, figs. 1-6.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, 388; Geol. Zentralbl., XXV, 43.

—— 1917 C

An Oklahoma Pleistocene fauna.

Bull. Geol. Soc. Amer., XXVIII, 212-213 (Abstract).

Troxell, Edward L.—Continued 1920 A

A tiny artiodactyl, *Hypisodus alacer* sp. nov.

Amer. Jour. Sci. (4), XLIX, 391-398, 4 figs.

Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 123; Geol. Zentralbl., XXVIII, 154; Neues Jahrb. Min. Geol. Pal., 1923, I, 317-318.

Review in Rev. crit. Paléozool., XXVII, 41.

—— 1920 B

Entelodonts in the Marsh collection.

Amer. Jour. Sci. (4), L, 243-255, 361-386, 431-445, plate iii, text-figs.

The bibliography (pages 245-247) presents 35 titles.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 388; Rev. Géol. et Sci. conn., IV, 1923, 122-123; Geol. Zentralbl, XXVII, 28; Nature, CVIII, 482.

Review in Rev. crit. Paléozool., XXVII, 40.

—— 1920 C

Review of Peterson's "The American diceratheres."

Amer. Jour. Sci. (4), L, 396-397.

—— 1921 A

The nature of a species in paleontology and a new kind of type specimen.

Jour. Geol. XXIX, 475-479.

—— 1921 B

The American bothriodonts.

Abstracts in Neues, Jahrb. Min. Geol. Pal., 1921, II, Ref., 388; Rev. Géol. et Sci. conn., IV, 1923, 122; Geol. Zentralbl., XXVII, 30.

Review in Rev. crit. Paléozool., XXVII, 39.

—— 1921 C

Palæolagus, an extinct hare.

Amer. Jour. Sci. (5), I, 340-348, figs. 1-20.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, II, Ref., 386; Rev. Géol. et Sci. conn., IV, 1923, 122; Geol. Zentralbl., XXVII, 30.

—— 1921 D

New amynodonts in the Marsh collection.

Amer. Jour. Sci. (5), II, 21-34, figs. 1-7.

Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 125-126; Neues Jahrb. Min. Geol. Pal., 1923, I, 314-316.

Review in Rev. crit. Paléozool., XXVII, 43.

—— 1921 E

New species of *Hyracodon*.

Amer. Jour. Sci. (5), II, 34-40, figs. 1-5.

Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 124-125; Neues Jahrb. Min. Geol. Pal., 1923, I, 314-316.

Review in Rev. crit. Paléozool, XXVII, 42.

Troxell, Edward L.—Continued 1921 F

Cænopus, the ancestral rhinoceros.

Amer. Jour. Sci. (5), II, 41-51, figs. 1-6.

Abstracts in Rev. Géol. et Sci. conn., IV, 1923, 124-125; Geol. Zentralbl., XXVII, 362; Neues Jahrb. Min. Geol. Pal., 1923, I, 314-316.

Review in Rev. crit. Paléozool., XXVII, 41.

—— 1921 G

A study of *Diceratherium* and the diceratheres.

Amer. Jour. Sci. (5), II, 197-208, figs. 1-6.

Abstracts in Rev. Géol. et Sci. conn., V, 115; in Rev. crit. Paléozool., XXVIII, 10, 1924; Geol. Zentralbl., XXVII, 184; Neues Jahrb. Min. Geol. Pal., 1923, I, 314-316.

—— 1922 A

Oligocene rodents of the genus *Ischyromys*.

Amer. Jour. Sci. (5), III, 123-130, 7 text-figs.

Abstracts in Rev. Géol. et Sci. conn., V, 115-116; in Rev. crit. Paléozool., XXVIII, 11, 1924; Geol. Zentralbl., XXVIII, 154.

—— 1922 B

The status of *Homogalax*, with two new species.

Amer. Jour. Sci. (5), III, 288-292, 4 figs.

Abstracts in Rev. Géol. et Sci. conn., V, 113-114; in Rev. crit. Paléozool., XXVIII, 8, 1924; Geol. Zentralbl., XXVIII, 155; Neues Jahrb. Min. Geol. Pal., 1923, I, 314.

—— 1922 C

Helaletes redefined.

Amer. Jour. Sci. (5), III, 365-370, 3 figs.

Abstracts in Rev. Géol. et Sci. conn., V, 114; in Rev. crit. Paléozool., XXVIII, 10, 1924; Neues Jahrb. Min. Geol. Pal., 1923, I, 313; Geol. Zentralbl., XXIX, 222.

—— 1922 D

Horned Eocene ungulates.

Amer. Jour. Sci. (5), IV, 31-37, figs. 1-5.

Abstracts in Rev. Géol. et Sci. conn., V, 114; in Rev. crit. Paléozool., XXVIII, 9, 1924; Geol. Zentralbl., XXIX, 251.

—— 1922 E

The genus *Hyrachyus* and its subgroups.

Amer. Jour. Sci. (5), IV, 38-48, pl. i, 5 text-figs.

Abstracts in Rev. Géol. et Sci. conn., V, 114; in Rev. crit. Paléozool., XXVIII, 9, 1924; Neues Jahrb. Min. Geol. Pal., 1923, II, 155; Geol. Zentralbl., XXIX, 251.

—— 1923 A

Review of Schlesinger on "Mastodonten der Budapester Sammlungen."

Amer. Jour. Sci. (5), V, 88-89.

Troxell, Edward L.—Continued 1923 B

Pauromys perditus, a small rodent.

Amer. Jour. Sci. (5), V, 155-156, 1 fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1924, I, 402; Geol. Zentralbl., XXIX, 156.

—— 1923 C

Diplolophus, a new genus of rodents.

Amer. Jour. Sci. (5), V, 157-159, 5 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1924, I, 402; Geol. Zentralbl., XXIX, 156.

—— 1923 D

The Eocene rodents *Sciuravus* and *Tillomys*.

Amer. Jour. Sci. (5), V, 383-396, 22 figs.

The bibliography presents titles of 10 papers.

Abstract in Geol. Zentralbl., XXX, 24.

—— 1923 E

The Apatemyidæ.

Amer. Jour. Sci. (5), V, 503-506, 6 figs.

—— 1923 F

A new marsupial.

Amer. Jour. Sci. (5), V, 507-510, 4 figs.

Review in Rev. crit. Paléozool., XXVIII, 167, 1924.

—— 1923 G

American rhinoceroses and the evolution of *Diceratherium*.

Bull. Geol. Soc. Amer., XXXIV, 134 (Abstract).

—— 1925 A

Thoracosaurus, a Cretaceous crocodile.

Amer. Jour. Sci. (5), X, 219-233, 6 figs.

—— 1925 B

The Bridger crocodiles.

Amer. Jour. Sci. (5), IX, 29-72, 22 text-figs.

There are 18 titles in the bibliography.

—— 1925 C

Hyposaurus, a marine crocodilian.

Amer. Jour. Sci. (5), IX, 489-514, 15 figs.

—— 1925 D

Mechanics of crocodile vertebræ.

Bull. Geol. Soc. Amer., XXXVI, 605-614, 6 figs.

—— 1926 A

Smilodectes or *Notharctus*.

Amer. Jour. Sci. (5), XI, 423-428, 3 figs.

True, F. W. 1884 A

A muskrat with a round tail.

Science (o.s.), IV, 34.

Describes *Neofiber alleni* new genus, new species.

—— 1884 B

On a new muskrat, *Neofiber alleni*, from Florida.

Proc. U. S. Nat. Mus., VII, 170-172.

True, F. W.—Continued 1904 A

The whalebone whales of the western North Atlantic, compared with those occurring in European waters, with some observations on the species of the North Pacific.

Smithson. Contrib. Knowl., XXXIII, i-vii+ 1-332 pages, 50 pls., 97 text-figs.

There is a bibliography of 92 titles.

—— 1905 A

Diagnosis of a new genus and species of fossil sea-lion from the Miocene of Oregon.

Smithson. Misc. Coll. (Quart), XLVIII, 47-49.

Abstracts in Geol. Centralbl., VIII, 372; Knowl. Scient. News, II, 230.

—— 1905 B

New name for *Pontoleon*.

Proc. Biol. Soc. Wash., XVIII, 253.

Proposes *Pontolis*.

—— 1905 C

The first discovery of fossil seals in America.

Science (n.s.), XXII, 794.

Abstract in Geol. Centralbl., VIII, 373.

—— 1906 A

Description of a new genus and species of fossil seal from the Miocene of Maryland.

Proc. U. S. Nat. Museum, XXX, 835-840, pls. lxxv, lxxvi.

Describes *Leptophoca lenis* and discusses the genera and species of extinct Phocidæ.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 439-440; Geol. Centralbl., XI, 379; Sci. Progress, I, 452; Rev. crit. Paléozool., X, 202.

—— 1907 A

Remarks on the type of the fossil cetacean *Agorophius pygmæus*.

Smithson. Instn. Publ. No. 1694, 1-8, pl. vi.

The plate illustrating this folio paper was prepared for Prof. Louis Agassiz, but was not published by him. It is entitled *Phocodon holmesii* Agass.

Abstract in Sci. Progress, II, 512.

—— 1907 B

Observations on the type specimen of the fossil cetacean *Anoplonassa forcipata* Cope.

Bull. Mus. Comp. Zool., LI, 95-106, pls. i-iii.

Abstracts in Sci. Progress, II, 512; Rev. crit. Paléozool., XIV, 5.

True, F. W.—Continued 1908 A

Remarks on the fossil cetacean *Rhabdosteus latiradix* Cope.

Proc. Acad. Nat. Sci. Phila., LX, 24-29, pl. vi, 3 text-figs.

Abstracts in Sci. Progress, III, 457; Rev. crit. Paléozool., XIV, 7; XV, 85.

—— 1908 B

On the classification of the Cetacea.

Proc. Amer. Philos. Soc., XLVII, 385-391.

—— 1908 C

The fossil cetacean *Dorudon serratus* Gibbes.

Bull. Mus. Comp. Zool., LII, 63-78, pls. i-iii, 2 text-figs.

Abstract in Rev. crit. Paléozool., XIV, 6.

—— 1908 D

On the occurrence of remains of fossil cetaceans of the genus *Schizodelphis* in the United States, and on *Priscodelphinus (?) crassangulum* Case.

Smithson. Misc. Coll. (Quart.), L, 449-460, pls. lix, lx.

Abstracts in Rev. crit. Paléozool., XIV, 4; XXI, 56; Sci. Progress, III, 458.

—— 1909 A

A further account of the fossil sea lion *Pontolis magnus* from the Miocene of Oregon.

U. S. Geol. Surv. Profess. paper LIX, 143-148, pls. xxi-xxiii.

Presents a list of the hitherto described species of sea lions.

—— 1909 B

Observations on living white whales, (*Delphinapterus leucas*) with a note on the dentition of *Delphinapterus* and *Stenodelphis*.

Smithson. Misc. Coll., LII, 325-330, pl. xxviii.

Abstract in Rev. crit, Paléozool., XIV, 5.

—— 1909 C

A new genus of fossil cetaceans from Santa Cruz territory, Patagonia; and description of a mandible and vertebræ of *Prosqualodon*.

Smithson. Misc. Coll., LII (Quart. Iss., V), 441-456, pls. xliii-xlv, 3 text-figs.

Abstract in Sci. Progress, IV, 664.

—— 1910 A

An account of the beaked whales of the family Ziphiidæ in the collection of the United States National Museum, with remarks on some specimens in other American museums.

Bull. U. S. Nat. Mus., LXXIII, 1-89, pls. i-xlii.

Abstracts in Amer. Jour. Sci. (4), XXX, 422; Nature, LXXXV, 116.

True, F. W.—Continued 1910 B

Description of a skull and some vertebræ of the fossil cetacean *Diochoticus vanbenedini* from Santa Cruz, Patagonia.

Bull. Amer. Mus. Nat. Hist., XXVIIII, 19-32, pls. i-v.

—— 1911 A

The origin of the porpoises of the family Delphinidæ.

Science (n.s.), XXXIII, 908.

—— 1911 B

Discovery of a fossil delphinoid cetacean, with tuberculate teeth.

Proc. Biol. Soc. Wash., XXIV, 37-38.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 132; Sci. Progress, VI, 564.

—— 1912 A

The genera of fossil whalebone whales allied to *Balæonoptera*.

Smithson. Misc. Coll., LIX, No. 6, 1-8.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 132; Sci. Progress, VIII, 9.

—— 1912 B

A fossil toothed cetacean from California, representing a new genus and species.

Smithson. Misc. Coll., LX, No. 11, 1-7, with pls. i, ii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 132; Sci. Progress, VIII, 9; Rev. crit. Paléozool., XXI, 56; Nature, XC, 418.

—— 1912 C

Description of a new fossil porpoise of the genus *Delphinodon* from the Miocene formation of Maryland.

Jour. Acad. Nat. Sci. Phila. (2), XV, 165-194, pls. xvii-xxvi.

Abstracts in Geol. Centralbl., XIX, 446; Neues Jahrb. Min. Geol. Pal., 1915, I, Ref., 132; Sci. Progress, VIII, 9-10.

—— 1912 D

Symposium on ten years progress in vertebrate paleontology. Marine mammals.

Bull. Geol. Soc. Amer., XXIII, 197-200.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, Case, Holland, Lull, Hay, Merriam, Dean, Eastman, Osborn, Williston, and Sinclair.

—— 1912 E

On the correlation of North American and European genera of fossil cetaceans.

Proc. internat. Zool. Congr., VII, Boston, 1907, 779-781.

True, F. W.—Continued 1913 A

Description of *Mesoplodon mirum*, a beaked whale recently discovered on the coast of North Carolina.

Proc. U. S. Nat. Mus., XLV, 651-657, pls. lii-lvii, 1 text-fig.

Abstract in Nature, XCII, 563.

Tschudi, Johann J. 1839 A

Classification der Batrachier, mit Berücksichtigung der fossilen Thiere dieser Abtheilung der Reptilien.

Mém. Soc. Sci. Nat. Neuchâtel, II, art. 3, 1-100, pls. i-vi.

Following the paper is an appendix written by Louis Agassiz.

Tukeman, H. 1899 A

The killing of the mammoth.

McClure's Mag., XIII, 504-514, 6 ills.

Fiction. See Lucas, F. A., 1900 A.

Tuomey, M. 1848 A

Report on the geology of South Carolina. Columbia, S. C.

Printed and published for the State. 4to., i-vi+1-293+i-lvi pages; geological map, 47 text-figs.

Contains lists of vertebrate fossils found in the Cretaceous, the Tertiary, and the Pleistocene; but usually determined only as to their genera.

—— 1850 B

First biennial report of the geology of Alabama. Tuskaloosa.

i-xxxii+1-176 pages.

Turnbull, Hubert 1909 A

The scales of salmon.

Field, CXIV, Dec. 11, 1094-1095, fig.; Dec. 18, 1119-1120; Dec. 25, 1175-1176.

Turner, H. N. 1847 A

Observations on the distinction between the cervical and dorsal vertebræ in the class Mammalia.

Proc. Zool. Soc. Lond., 1847, XV, 110-114, 2 figs.

Also in Froriep's Notizen, VIII, col. 177-180.

—— 1850 B

Contributions to the anatomy of the tapir.

Proc. Zool. Soc. Lond., XVIII, 102-106.

Turner, Henry Ward 1895 A

Auriferous gravels of the Sierra Nevada.

Amer. Geologist, XV, 371-379.

—— 1906 A

The Terlingua quicksilver deposits.

Econom. Geol., I, 265-281, text-figs. 16-18.

Turner, W. 1870 A

On the species of seal found in Scotland in beds of glacial clay.

Jour. Anat. Physiol. Lond., IV, 260-270.

—— 1870 B

On the sternum and ossa innominata of the Lôngniddry whale.

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Amer. Mus. Novit., CLXXIII, 1-4, 2 figs.

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Preliminary report on the geology of the coastal plain of Georgia.

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Anat. Hefte, Arb., XXXIII, 155-203, 12 text-figs.

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——— 1911 A

Beiträge zur Kenntnis des Kopfes der Wirbeltiere. I: Die Entwickelung des Primordialcranium von *Lepidosteus osseus.*

Anat. Hefte, Arb., XLIV, 93-225, pls. A-C.

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Anat. Anz., XLIX, 368-376.

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Zool. Jahrb. Anat., XII, 160-406, pls. x-xvii.

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Entwicklung der Columella auris bei den Lacertiliern. Ein Beitrag zur Kenntnis der schalleitenden Apparate und des Zungenbeinbogens bei den Sauropsiden.

Zool. Jahrb. Anat., XIX, 107-188, pls. viii-xi, 10 text-figs.

Pages 351-356 are occupied by an extensive bibliography.

Versluys, Jan—Continued 1908 A

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Tijdschr. Nederl. Dierk. Vereen. (2), X, Versl., xviii-xix.

Printed in Dutch.

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Zool. Jahrb. Anat., XXVIII, 283-294, 3 text-figs.

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Anat. Anz., XXXVI, 487-495.

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——— 1910 B

Streptostylie bei Dinosauriern, nebst Bemerkungen über die Verwandtschaft der Vögel und Dinosaurier.

Zool. Jahrb. Anat., XXX, 175-260, pl. xii, 25 text-figs.

See Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 325-326; Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 84-87, for abstracts.

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Waren die sauropoden Dinosaurier Pflanzenfresser?

Zool. Jahrb. Syst., XXIX, 425-450, pl. xvii, 10 text-figs.

The bibliography comprises 32 titles.

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Anat. Anz., XXXVIII, 137-144.

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Verh. internat. Zool.-Kongr., Graz, 1910, 490-503, 5 text-figs.

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Versluys, Jan—Continued 1912 B

Das Streptostylie-Problem und die Bewegungen im Schädel bei Sauropsiden.

Zool. Jahrb. Anat., Suppl. 15, II, 545-714, pl. xxxi, 77 text-figs.

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Handwörterbuch der Naturwissenschaften (Gustav Fischer, Jena), I, 313-338, 23 figs.

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Rep. Brit. Assoc. Adv. Sci., LXXXIII, Birmingham, 1913, 791-807, 9 text-figs.

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Palaeont. Zeitschr., I, 321-347, 10 text-figs.

There is a bibliography of 37 titles.

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—— 1919 A

Über die Phylogenie der Schläfengruben und Jochbogen bei den Reptilia.

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—— 1922 A

Die Kaubewegungen von *Trachodon.*

Palaeont. Zeitschr., IV, 80-87; 92, 6 figs.

Abstract in Geol. Zentralbl., XXXII, 118.

—— 1922 B

Ueber die Rückbildung der Kiemenbogen bei den Selachii.

Bijdr. Dierk. Amsterdam, XXII (Feestnum. Max Weber), 95-105, 7 text-figs.

The bibliography comprises 63 titles.

—— 1922 C

Eine lebende Anosteiride, *Carettochelys insculpta* Ramsay.

Palaeont. Zeitschr., V, 97-99, 1 fig.

Abstract in Geol. Zentralbl., XXXII, 181.

—— 1923 A

Der Schädel des Skelettes von *Trachodon annectens* im Senckenberg Museum.

Abh. Senckenb. naturf. Ges., XXXVIII, 1-19, pls. i-iv, 2 text-figs.

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Remark on Murænidæ.

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Palaeont. Zeitschr., VII, 182.

Vettuch, C. 1803 A

Einige Bemerkungen über das Skelett des unbekannten Quadruped's vom Plata-Strome (*Megatherium americanum*).

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Watson, D. M. S.—Continued 1925 B
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Forest and Stream, XL, 68-69, with one figure.

Deals with distribution and habits of musk-ox (*Ovibos moschatus*).

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Wageman, Carroll H. 1915 A

Anticlinal structure in parts of Cotton and Jefferson Counties, Oklahoma.

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Der Stützknochen, Os nariale, in der Nasenhöhle bei den Gürteltieren, Dasypodidæ, und seine homologen Gebilde bei Amphibien, Reptilien und Monotremen.

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Abh. Senckenb. naturf. Ges., XXXVI, 361-372, pls. xxviii-xxx.

Weidenreich, Franz 1913 A

Über das Hüftbein und das Becken der Primaten und ihre Umformung durch den aufrechten Gang.

Anat. Anz., XLIV, 497-513, 3 text-figs.

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Zeitschr. Morphol. Anthrop., XXVI, 51-282, 65 figs.

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Zeitschr. wiss. Zool., LXIX, 492-532.
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Die Furcula. Ein Beitrag zur Osteologie der Vögel.
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Proc. Yorksh. Geol. Polyt. Soc. (n.s.), XIV, 86-87, pl. xviii.
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Geol. Mag. (4), VIII, 71-72.
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Proc. Yorksh. Geol. Polyt. Soc., XIV, 474-483, 1 text-fig.

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The composition, origin, and relationships of the Corniferous fauna in the Appalachian province of North America.
Jour. Geol., X, 423-432.
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The skull of *Acanthias vulgaris.*
Jour. Morphol., XXVIII, 417-436, pls. i-iii.
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New cestraciont teeth from the west-American Triassic.
Bull. Dept. Geol. Univ. Calif., v, 71-73, pl. vii.
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Report of discovery of mastodon tusk.
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Jour. Geol., XXV, 555-557, 1 text-fig. Abstract in Jour. Wash. Acad. Sci., VIII, 408.

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A fossil owl from the Bridger Eocene.
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Abstract in Geol. Zentralbl., XXX, 254.

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Bull. Mus. Comp. Zool., LXVII, 183-193, 4 pls., 4 text-figs.

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Descriptions of additional fossil birds from the Miocene of Nebraska.
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Fossil birds from the Green River deposits of eastern Utah.
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——— 1926 C
Description of a fossil hawk from the Miocene of Nebraska.
Ann. Carnegie Mus., XVI, 403-409, pl. xxxviii.

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Observations on fossil birds described from the Miocene of Maryland.
Auk, XLIII, 462-468.
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The fossil birds of North America.
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An additional record for the fossil hawk *Urubitinga enecta*.
Amer. Mus. Novit., No. CCXLI, 1-3, 3 figs.

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Auk, XLIV, 561.

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Prehistoric ornithology in North America.
Jour. Wash. Acad. Sci., XVIII, 145-158.

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Bones of birds from the Ciego Montero deposits of Cuba.
Amer. Mus. Novit., No. CCCI, 1-5, 2 figs.

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Additional specimens of fossil birds from the Upper Tertiary deposits of Nebraska.
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Proc. Biol. Soc. Wash., ii, 14-66.

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The geology of the Susquehanna River region in the six counties of Wyoming, Lackawanna, Luzerne, Columbia, Montana, and Northumberland.
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White, J. W. 1905 A
Ueber die Entwicklung des Kopfskeletts bei Selachiern.
C. R. Congr. internat. Zool., vi, Berne, 1904, 319-322.

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A sternum in *Hexanchus griseus.*
Anat. Anz., xi, 222-224, 2 text-figs.

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Note on the extra-branchial cartilages of *Scyllium canicula.*
Anat. Anz., xii, 158.

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Descriptions of fossils of Grand Rapid.
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Notes on the skeleton of a white whale or *Beluga,* recently discovered in Pleistocene deposits at Pakenham, Ontario.
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Amer. Jour. Anat., XII, 89-106, 8 figs.

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Some remarks on the teleostean caudal fin.

Ann. Mag. Nat. Hist. (8), v, 426-428.

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Geol. Surv. Ill., I, 153-207, section and map.

—— 1867 C

Exhibition of a canine tooth supposed to belong to a hyaena.

Proc. Calif. Acad. Sci., III, 356-357.

Whitney, J. D.—Continued 1879 B

Human remains and works of art in the auriferous gravel series.

Mem. Mus. Comp. Zool., VI, 258-288.

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Ann. Mag. Nat. Hist. (10), I, 255-264, pl. xiii, 3 text-figs.

The bibliography presents 15 titles.

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Smithson. Contrib. Knowl., XV, art. III, i-v+1-32 pages, 2 pls., 11 text-figs.

Wichmann, C. E. A. 1907 A

Over fossiele Trichechiden uit Zeeland en België.

Versl. Med. Akad. Amsterdam, XV, pt. 2, 798-811, plate, 2 text-figs.

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Das Kopfskelet der Urodelen, ein Beitrag zur vergleichenden Anatomie des Wirbelthier-Schädels.

Morphol. Jahrb., III, 352-448, 459-548, 9 pls., 6 text-figs.

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Nachträgliche Bemerkungen zu meinem Aufsatze; "Die ältesten Formen des Carpus und Tarsus der heutigen Amphibien."

Morphol. Jahrb., III, 152-154, 5 text-figs.

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—— 1880 D

Ueber die Vermehrung des os centrale in Carpus und Tarsus des Axolotls.

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—— 1881 B

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Description of *Trachyderma horridum.*

Isis, XXII, cols. 421-422.

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—— 1829 B

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Isis von Oken, XXII, cols. 624-629.

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Herpetologia Mexicana, etc.

Folio. Berlin, 1834, i-vi+1-54, pls. i-ix.

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Variability of external sutures in the skull of *Chelone mydas* L.

Amer. Naturalist, XXXI, 446.

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Abstract in Geol. Centralbl., I, 667.

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Amer. Jour. Sci. (4), XIV, 95-108, 2 text-figs.

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—— 1903 A

Notes on the Cretaceous turtle *Archelon.* I: On the structure of the carapace. II: Associated fossils.

Amer. Jour. Sci. (4), XV, 211-216, 1 text-fig.

Abstract in Geol. Centralbl., V, 39.

Wieland, G. R.—Continued 1903 B

Polar climate in time the major factor in the evolution of plants and animals.

Amer. Jour. Sci. (4), XVI, 401-430.

—— 1904 A

Structure of the Upper Cretaceous turtles of New Jersey; *Adocus, Osteopygis,* and *Propleura.*

Amer. Jour. Sci. (4), XVII, 112-132, pls. i-ix, 7 text-figs.

Abstracts in Geol. Centralbl., VI, 715; Rev. crit. Paléozool., X, 145.

—— 1904 B

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Amer. Jour. Sci. (4), XVIII, 183-196, pls. v-viii, 6 text-figs.

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Amer. Jour. Sci. (4), XX, 430-447, 9 text-figs.

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Ann. Carnegie Mus., IV, 8-14, pls. i, ii, 5 text-figs.

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—— 1906 C

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Wieland, G. R.—Continued 1907 A

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—— 1909 A

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Plesiosaurus (*Polyptychodon*) *mexicanus* Wieland.

Parergon Inst. geol. Mexico, iii, 359-365, pl. 1.

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—— 1909 B

A new armored saurian from the Niobrara.

Amer. Jour. Sci. (4), xxvii, 250-252, 7 text-figs.

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—— 1911 A

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Amer. Jour. Sci. (4), xxxi, 112-124, 7 text-figs.

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—— 1912 B

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—— 1920 A

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Wieland, G. R.—Continued 1925 A

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Science (n.s.), lxi, 601-603.

—— 1925 B

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Wijhe, J. W. van. See **Van Wijhe, J. W.**

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Isis von Oken, 1823, 509-513.

—— 1824 A

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—— 1875 A

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Wilder, Burt G.—Continued 1876 A

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8vo. Columbus, Ohio, i-vi+1-860, numerous illustrations.

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—— 1885 A

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—— 1893 D

The Niobrara Cretaceous of western Kansas.

Trans. Kansas Acad. Sci., XIII, 107-111, 2 plates.

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Vertebrates from the Kansas Permian.

Science (n.s.), v, 395.

—— 1898 E

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—— 1902 A

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—— 1902 B

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Amer. Jour. Anat., i, 297-305, plate.

For note on this paper see Neues Jahrb. Min. Geol. Pal., 1905, i, Ref., 518.

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—— 1902 C

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Jour. Geol., x, 520-531, 2 plates.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, i, Ref., 518; Geol. Centralbl., iv, p. 722; ix, 727.

—— 1902 D

Restoration of *Dolichorhynchops osborni*, a new Cretaceous Plesiosaur.

Kansas Univ. Sci. Bull., i, 241-244, pl. xi.

Williston, S. W.—Continued 1902 E

Notes on some new or little known extinct reptiles.

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—— 1902 F

On certain homoplastic characters in aquatic air-breathing vertebrates.

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—— 1902 G

Winged reptiles.

Pop. Sci. Month., lx, 314-322, 2 figs.

—— 1902 H

Dragons of the air.

Science (n.s.), xv, 67-68.

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—— 1902 I

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Science (n.s.), xv, 586-587.

A review of Lucas' work with the same title.

—— 1902 J

A fossil man from Kansas.

Science (n.s.), xvi, 195-196.

—— 1902 K

The Laramie Cretaceous of Wyoming.

Science (n.s.), xvi, 952-953.

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—— 1902 L

Bibliography and catalogue of the fossil Vertebrata of North America. By Oliver Perry Hay.

Jour. Geol., x, 918-919.

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—— 1902 M

An arrow-head found with bones of *Bison occidentalis* Lucas, in western Kansas.

Amer. Geologist, xxx, 313-315, 1 text-fig.

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—— 1902 N

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Williston, S. W.—Continued 1903 A

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—— 1903 B

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—— 1903 C

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Science (n.s.), XVII, 980.

—— 1903 D

Review of J. C. Merriam's "New Ichthyosauria from the Upper Triassic of California."

Jour. Geol., XI, 515-516.

—— 1904 A

The relationships and habits of the mosasaurs.

Jour. Geol., XII, 43-51.

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—— 1904 B

The temporal arches of the Reptilia.

Biol. Bull., VII, 175-192, text-figs. 1-17.

—— 1904 C

The fingers of pterodactyls.

Geol. Mag. (5), I, 59-60.

Abstracts in Geol. Centralbl., V, 328; Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 168; Neues Jahrb. Min. Geol. Pal., 1905, I, Ref., 520.

—— 1904 D

Notice of some new reptiles from the Upper Trias of Wyoming.

Jour. Geol., XII, 688-697, text-figs. 1-6.

—— 1904 E

The stomach stones of the plesiosaurs.

Science (n.s.), XX, 565.

—— 1904 F

Some osteological terms.

Science (n.s.), XVIII, 829-830.

Williston, S. W.—Continued 1905 A

On the occurrence of an arrow-head with bones of an extinct bison.

Internat. Congr. Americanists, XIII, New York, 1902, 335-337, 1 text-fig.

—— 1905 B

The Hallopus, Baptanodon, and Atlantosaurus beds of Marsh.

Jour. Geol., XIII, 338-350.

Abstracts in Geol. Centralbl., X, 513; Rev. crit. Paléozool., XII, 80-82.

—— 1905 C

A new armored dinosaur from the Upper Cretaceous of Wyoming.

Science (n.s.), XXII, 503-504.

Abstracts in Neues Jahrb. Min. Geol. Pal., Ref., 144; Rev. crit. Paléozool., XII, 79.

—— 1905 D

An important new locality for Triassic vertebrates.

Science (n.s.), XXI, 297-298.

—— 1905 E

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Science (n.s.), XXI, 294-295.

—— 1905 F

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Amer. Geologist, XXXV, 342-346.

—— 1905 G

[Reviews of papers by Osborn, Merriam, and Fraas.]

Jour. Geol., XIII, 183-184.

—— 1906 A

American amphicœlian crocodiles.

Jour. Geol., XIV, 1-18, 12 text-figs.

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—— 1906 B

North American plesiosaurs; *Elasmosaurus*, *Cimoliasaurus*, and *Polycotylus*.

Amer. Jour. Sci. (4), XXI, 221-236, pls. i-vi, text-figs. 1-5.

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—— 1907 A

The skull of *Brachauchenius*, with observations on the relationships of the plesiosaurs.

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Abstracts in Geol. Centralbl., XI, 332; Sci. Progress, II, 517; Rev. crit. Paléozool., XII, 8; Amer. Jour. Sci. (4), XXV, 85; Jahresber. Anat. Entwickl. (N.F.), XIII, pt. 3, 93.

Williston, S. W.—Continued 1907 B

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Bull. Univ. Texas, No. 93 (Sci. series No. 11), 53-54.

——— 1908 A

The Cotylosauria.

Jour. Geol., XVI, 139-148, 6 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, II, Ref., 122-123; Geol. Centralbl., XII, 222; Sci. Progress, III, 469.

——— 1908 B

The oldest known reptile, *Isodectes punctulatus* Cope.

Jour. Geol., XVI, 395-400, 2 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, II, Ref., 123-124; Geol. Centralbl., XII, 598; Sci. Progress, III, 469; Rev. crit. Paléozool., XIII, 81.

——— 1908 C

North American plesiosaurs: *Trinacromerum.*

Jour. Geol., XVI, 715-736, figs. 1-15.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, I, Ref., 441-442; Geol. Centralbl., XIII, 244-245; Rev. crit. Paléozool., XIII, 81.

——— 1908 D

Lysorophus, a Permian urodele.

Biol. Bull., XV, 229-240, figs. 1-5.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1909, II, Ref., 124-125; Rev. crit. Paléozool., XIII, 82; Jahresber. Anat. Entwickl. (N.F.), XIV, pt. 3, 159.

——— 1908 E

The evolution and distribution of the plesiosaurs.

Science (n.s.), XXVII, 726-727.

——— 1908 F

A new group of Permian amphibians.

Science (n.s), XXVIII, 316, 317.

——— 1908 G

The fossil turtles of North America.

Science (n.s.), XXVIII, 803, 804.

A review of Hay, O. P., 1908 A.

——— 1908 H

[Extract from letter sent to W. J. Holland about mosasaurs.]

Ann. Carnegie Mus., IV, 163-164.

——— 1908 I

Pelycosauria of North America.

Amer. Naturalist, XLII, 628-629.

Review and criticism of Case, E. C., 1907 E.

——— 1908 J

The Ankylosauridæ.

Amer. Naturalist, XLII, 629-630.

Review and criticism of Brown, B., 1908 B.

Williston, S. W.—Continued 1909 A

The faunal relations of the early vertebrates.

Jour. Geol., XVII, 389-402.

Reprinted in Bailey Willis and R. D. Salisbury's *"Outlines of Geologic History,"* University of Chicago Press, 1910, pages 163 to 175.

Abstracts in Geol. Centralbl., XV, 214; Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 292; Rev. crit. Paléozool., XV, 24-29; Jahresber. Anat. Entwickl. (N.F.), XV, pt. 3, 157.

——— 1909 B

New or little known Permian vertebrates; *Trematops,* new genus.

Jour. Geol., XVII, 636-658, 7 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 466-467; Geol. Centralbl., XIV, 490; Rev. crit. Paléozool., XIV, 82-84.

——— 1909 C

New or little known Permian vertebrates: *Pariotichus.*

Biol. Bull., XVII, 241-255, 6 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 465-466; Rev. crit. Paléozool., XIV, 84-85.

——— 1909 D

The skull and extremities of *Diplocaulus.*

Trans. Kansas Acad. Sci., XXII, 122-131, plates i-v.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 467-468; Geol. Centralbl., XV, 218.

——— 1909 E

Communications and remarks before American Society of Vertebrate Paleontologists.

Science (n.s.), XXIX, 194, 195, 198.

——— 1910 A

Cacops, Desmospondylus: new genera of Permian vertebrates.

Bull. Geol. Soc. Amer., XXI, 249-284, pls. vi-xvii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 471-473; Geol. Centralbl., XV, 651; Sci. Progress, V, 688-689, pl.; Rev. crit. Paléozool., XV, 31-32.

——— 1910 B

The skull of *Labidosaurus.*

Amer. Jour. Anat., X, 69-81, plates i-iii.

Abstract in Neues Jahrb. Min. Geol. Pal., 1910, II, Ref., 469-470; Jahresber. Anat. Entwickl. (N.F.), XVI, pt. 3, 89.

——— 1910 C

The occurrence of a sauropod dinosaur in the Trinity Cretaceous of Oklahoma. Introductory note.

Jour. Geol., XVIII, 93.

Williston, S. W.—Continued 1910 D

Dissorophus Cope.

Jour. Geol., XVIII, 526-536, pls. i-iii.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 135-137; Geol. Centralbl., XV, 651; Rev. crit. Paléozool., XV, 131; Jahresber. Anat. Entwickl. (N F.), XVIII, pt. 3, 207; Sci. Progress, V, 688, fig.

—— 1910 E

A mounted skeleton of *Platecarpus*.

Jour. Geol., XVIII, 537-541, 1 fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 327; Geol. Centralbl., XV, 607; Rev. crit. Paléozool., XV, 149.

—— 1910 F

New Permian reptiles: Rhachitomous vertebræ.

Jour. Geol., XVIII, 585-600, 1 plate, 3 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 130-131; Rev. crit. Paléozool., XV, 149; Sci. Progress, V, 687; Jahresber. Anat. Entwickl. (N.F.), XVIII, pt. 3, 207.

—— 1910 G

The birthplace of man.

Pop. Sci. Month., LXXVII, 594-597.

—— 1911 A

Restoration of *Seymouria baylorensis* Broili, an American cotylosaur.

Jour. Geol., XIX, 232-237, 1 text-fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 135; Geol. Centralbl., XVIII, 523.

Review in Rev. crit. Paléozool., XVI, 7.

—— 1911 B

American Permian vertebrates.

Univ. Chicago Press, 8vo., 1-145, p's. i-xxxviii, text-figs. 1-32.

Abstracts in Geol. Centralbl., XVII, 706; Sci. Progress, VI, 577; Geol. Mag. (5), IX, 520.

Reviews in Science (n.s.), XXXVI, 216; Rev. crit. Paléozool., XVI, 151-156; Nature, XC, 215.

—— 1911 C

Permian reptiles.

Science (n.s.), XXXIII, 631-632.

For brief notice see Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 135.

—— 1911 D

A new family of reptiles from the Permian of New Mexico.

Amer. Jour. Sci. (4), XXXI, 378-398, figs. 1-7.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, II, Ref., 133-134; Geol. Centralbl., XVII, 430; Sci. Progress, VI, 576.

Review in Rev. crit. Paléozool., XVI, 8.

Williston, S. W.—Continued 1911 E

The wing-finger of pterodactyls, with restoration of *Nyctosaurus*.

Jour. Geol., XIX, 696-705, 4 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 148; Geol. Centralbl., XVII, 705.

Review in Rev. crit. Paléozool., XVI, 236.

—— 1911 F

Review of F. von Huene on *Erythrosuchus* (Huene, F., 1911 D).

Jour. Geol., XIX, 661-664.

—— 1912 A

Restoration of *Limnoscelis*, a cotylosaur reptile from New Mexico.

Amer. Jour. Sci. (4), XXXIV, 457-468, figs. 1-32.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, I, Ref., 521; Geol. Centralbl., XIX, 444; Sci. Progress, VIII. 17; Rev. crit. Paléozool., XVII, 76.

—— 1912 B

Primitive reptiles.

Jour. Morphol., XXIII, 637-663, 1 fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, I, Ref., 518-520; Sci. Progress, VIII, 17.

—— 1912 C

The Permo-Carboniferous of northern New Mexico.

Jour. Geol., XX, 1-12, 2 text-figs.

—— 1912 D

A review of G. B. Eaton's "Osteology of *Pteranodon*."

Jour. Geol., XX, 288.

—— 1912 E

Symposium on ten years progress in vertebrate paleontology. Evolutionary evidences.

Bull. Geol. Soc. Amer., XXIII, 257-262.

For the other articles of this symposium see the 1912 papers of Matthew, Gidley, Peterson, Gregory, True, Case, Holland, Lull, Hay, Merriam, Dean, Eastman, Osborn, and Sinclair.

—— 1912 F

Review of Karl A. von Zittel's "Grundzüge der Paläontologie"; edition of 1911.

Jour. Geol., XX, 91-93.

—— 1913 A

An ancestral lizard from the Permian of Texas.

Science (n.s.), XXXVIII, 825-826.

Williston, S. W.—Continued 1913 B

The primitive structure of the mandible in amphibians and reptiles.

Jour. Geol., XXI, 625-627, fig. 1.

Brief abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 164; Geol. Zentralbl., XXI, 38.

—— 1913 C

The skulls of *Araeoscelis* and *Casea*, Permian reptiles.

Jour. Geol., XXI, 743-747, figs. 1, 2.

Abstract in Geol. Zentralbl., XXI, 265.

—— 1913 D

Ostodolepis brevispinatus, a new reptile from the Permian of Texas.

Jour. Geol., XXI, 363-366, 2 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, I, Ref., 150; Geol. Centralbl., XX, 704.

—— 1913 E

"The skeleton of *Ornithodesmus latidens*." By R. W. Hooley.

Jour. Geol., XXI, 754-756.

A review of the paper, Hooley, R. W., 1913 A.

—— 1914 A

Water reptiles of the past and present.

Univ. Chicago Press, vii+1-251 pages, 131 figs.

Reviewed in Science (n s.), XLI, 391-392; Nature, London, XCV, 3; Neues Jahrb. Min. Geol. Pal., 1915, II, Ref., 281-282; Sci. Progress, IX, 715; Ann. Mag. Nat. Hist. (8), XVIII, 502; Jour. Geol., XXXIII, 1915, 94.

Abstract in Geol. Mag. (6), II, 37-38.

—— 1914 B

Broiliellus, a new genus of amphibians from the Permian of Texas.

Jour. Geol., XXII, 49-56, 3 figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., pp. 474-475; Geol. Zentralbl., XXI, 622.

—— 1914 C

Restorations of some American Permocarboniferous amphibians and reptiles.

Jour. Geol., XXII, 57-70, 11 figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 475.

—— 1914 D

The osteology of some American Permian vertebrates. I.

Jour. Geol. XXII, 364-419, 19 text-figs.

See also Contrib. Walker Mus., I, 107-162, 19 figs. Reviewed in Neues Jahrb. Min. Geol. Pal., 1916, I, 269-272.

Williston, S. W.—Continued 1914 E

American Permocarboniferous reptiles and amphibians.

C. R. Congr. internat. Zool., Monaco, 1913, 120-121.

—— 1915 A

New genera of Permian reptiles.

Amer. Jour. Sci. (4), XXXIX, 575-579, 2 figs.

Reviewed in Neues Jahrb. Min. Geol. Pal., 1916, I, 272-273.

Abstract in Geol. Zentralbl., XXV, 467.

—— 1915 B

Trimerorhachis, a Permian temnospondyl amphibian.

Jour. Geol., XXIII, 246-255, 6 figs.

Reviewed in Neues Jahrb. Min. Geol. Pal., 1915, II, Ref., 288-289.

—— 1915 C

A new genus and species of American Theromorpha, *Mycterosaurus longiceps*.

Jour. Geol., XXIII, 554-559, 4 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1916, I, 273-274.

—— 1915 D

The first discovery of dinosaurs.

Amer. Mus. Nat. Hist. Handbook series No. 5, New York, 124-131, fig. 44.

—— 1916 A

The osteology of some American Permian vertebrates. II.

Contrib. Walker Mus., I, 165-192, text-figs. 20-37.

Abstract in Neues Jahrb. Min. Geol. Pal., 1918, Ref., 221-223.

—— 1916 B

Synopsis of the American Permocarboniferous Tetrapoda.

Contrib. Walker Mus., I, 193-236, text-figs. 38-84.

Abstracts in Nature, XCVIII, 356; Neues Jahrb. Min. Geol. Pal., 1918, Ref., 217-220.

—— 1916 C

The skeleton of *Trimerorhachis*.

Jour. Geol., XXIV, 291-297, 3 text-figs.

Abstract in Neues Jahrb. Min. Geol. Pal., 1918, Ref., 220.

—— 1916 D

Origin of the sternum in the reptiles and mammals (Abstract).

Bull. Geol. Soc. Amer., XXVII, 152.

—— 1917 A

Labidosaurus Cope, a Lower Permian cotylosaur reptile from Texas.

Jour. Geol., XXV, 309-321; 9 figs. Reprinted in Contrib. Walker Mus., II, 45-47, 1917.

Williston, S. W.—Continued 1917 B

Sphenacodon Marsh, a Permocarboniferous theromorph reptile from New Mexico.

Proc. Nat. Acad. Sci., II, 650-654, 1 fig.

—— 1917 C

The phylogeny and classification of reptiles.

Jour. Geol., XXV, 411-421, 5 figs. Reprinted in Contrib. Walker Mus., II, 61-71, figs. 1-5, 1917.

Abstract in Geol. Mag. (6), V, 374-375.

—— 1917 D

Comments on nomenclature of skull elements of Permian Tetropoda.

Bull. Geol. Soc. Amer., XXVIII, 985-986.

—— 1918 A

The evolution of vertebræ.

Contrib. Walker Mus., II, 75-85, 6 text-figs.

Abstract in Bull. Geol. Soc. Amer., XXIX, 146.

—— 1918 B

The osteology of some American Permian vertebrates. III.

Contrib. Walker Mus., II, 87-112, pls. iii, iv, text-figs. 7-19.

—— 1925 A

The osteology of the reptiles. Part I: The skeleton of reptiles.

Pages 1-201, figs. 1-159.

Arranged and edited by William King Gregory, 8vo., i-xiii+1-300 pages, 191 figs.

—— 1925 B

The osteology of reptiles. Part II: The classification and range of reptiles. Pages 205-300, figs. 160-191.

Reviews in Amer. Naturalist, LX, 96-98; Jour. Geol., XXXIV, 92; Geol. Mag., LXIII, 227; Amer. Jour. Sci. (5), XI, 96; Nature, CXVII, 509.

——, and E. C. **Case** 1892 A

Kansas mosasaurs.

Kansas Univ. Quart., I, 15-32, pls. ii-vi.

Gives list of species, and describes the osteology of *Clidastes velox* and *C. westii* n. sp.

—— —— 1912 A

The Permo-Carboniferous of northern New Mexico.

Jour. Geol., XX, 1-12, 2 figs.

Abstract in Geol. Centralbl., XVII, 701-702.

Williston, S. W., and E. C. **Case**—Continued 1913 A

Description of the vertebrate-bearing beds of north-central New Mexico.

Publ. Carnegie Instn. Wash., No. 181, 1-6, 2 figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 154; Sci. Progress, VIII, 650; Amer. Jour. Sci. (4), XXXVII, 117.

—— —— 1913 B

Description of a nearly complete skeleton of *Ophiacodon* Marsh.

Publ. Carnegie Instn. Wash., No. 181, 37-59, pl. i, text-figs. 23-36.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 156-158; Amer. Jour. Sci. (4), XXXVII, 118.

—— —— 1913 C

A description of *Scoliomus puercensis*, new genus and species.

Publ. Carnegie Instn. Wash., No. 181, 60, fig. 37.

—— —— 1913 D

A description of *Edaphosaurus* Cope.

Publ. Carnegie Instn. Wash., No. 181, 71-81, figs. 46-51.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1914, II, Ref., 158-159; Amer. Jour. Sci. (4), XXXVIII, 119.

——, and R. L. **Moodie** 1913 A

New plesiosaurian genus from the Niobrara Cretaceous of Nebraska (Abstract).

Bull. Geol. Soc. Amer., XXIV, 120-121.

—— —— 1917 A

Ogmodirus martinii, a new plesiosaur from the Cretaceous of Kansas.

Kan. Univ. Sci. Bull., X, 61-73, pls. i-v, 3 text-figs.

Abstract in Rev. crit. Paléozool., XXIV, 89-90.

See also **Case** and **Williston**.

Wills, Leonard J. 1916 A

The structure of the lower jaw of Triassic labyrinthodonts.

Proc. Birmingh. Nat. Hist. Soc., XIV, 5-20, pls. ii, iii, 11 text-figs.

Abstract in Rev. crit. Paléozool., XXIV, 101.

Wilser, J. L. 1923 A

Pygopterus crecelii n. sp.

Ber. naturf. Ges. Freiburg, XXIII, 2, 68-78, 1 fig.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1925, I, pt. 3, 383; Rev. crit. Paléozool., XXVIII, 102.

Wilson, Charles Woodruff 1914 A

Development and histology of the integument of the nine-banded armadillo (*Tatusia novemcincta*).

Bull. Univ. Texas, No. CCCVIII (Sci. ser. XXVI), 1-18, pls. i-x.

The bibliography presents titles of 13 works on the subject.

Wilson, Thomas 1892 A

Man and the mylodon. Their possible contemporaneous existence in the Mississippi Valley.

Amer. Naturalist, XXVI, 628-631.

—— 1901 A

La haute ancienneté de l'homme dans l'Amérique du Nord.

L'Anthropologie, XII, 1900, 297-367, 31 figs.

Wiman, Carl 1905 A

Vorläufige Mitteilung über die alttertiären Vertebraten der Seymourinsel.

Bull. Geol. Instn. Upsala, VI, 247-253, pl. xii.

—— 1910 A

Ein paar Labyrinthodontenreste aus der Trias Spitzbergens.

Bull. Geol. Instn. Upsala, IX, 34-40, pl. ii, 2 text-figs.

—— 1910 B

Ichthyosaurier aus der Trias Spitzbergens.

Bull. Geol. Instn. Upsala, X, 124-148, pls. v-x, 6 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1911, I, Ref., 317-318; Sci. Progress, VI, 574.

Review in Rev. crit. Paléozool., XVI, 227.

—— 1912 A

Über *Mixosaurus cornalianus* Bass sp.

Bull. Geol. Instn. Upsala, XI, 230-241, pl. xi, 2 text-figs.

There is a bibliography of 18 titles.

Abstract in Geol. Centralbl., XVII, 478.

—— 1913 A

Über die paläontologische Bedeutung des Massensterbens unter den Tieren.

Palaeont. Zeitschr., I, 145-154.

Abstract in Geol. Centralbl., XX, 228-229.

—— 1914 A

Über das Hinterhaupt der Labyrinthodonten.

Bull. Geol. Instn. Upsala, XII, 1-8, 8 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1913, II, Ref., 349-350; Geol. Centralbl., XIX, 316.

Wiman, Carl—Continued 1915 A

Über die Stegocephalen aus der Trias Spitzbergens.

Bull. Geol. Instn. Upsala, XIII, 1-34, pls. i-ix, 10 text-figs.

Reviewed in Neues Jahrb. Min. Geol. Pal., 1915, II, Ref., 286-287.

Abstract in Rev. crit. Paléozool., XXIV, 45.

—— 1916 A

Notes on the marine Triassic reptile fauna of Spitzbergen.

Bull. Dept. Geol. Univ. Calif., X, 63-73, 5 text-figs.

Abstract in Geol. Zentralbl., XXIII, 121.

—— 1916 B

Neue Stegocephalenfunde aus dem Posidonomyaschiefer Spitzbergens.

Bull. Geol. Instn. Upsala, XIII, 209-222, pls. xv, xvi, 4 text-figs.

The bibliography presents 11 titles. Abstract in Neues Jahrb. Min. Geol. Pal., 1916, II, 131-132; Rev. crit. Paléozool., XXIV, 46.

—— 1916 C

Ein Plesiosaurierwirbel aus der Trias Spitzbergens.

Bull. Geol. Instn. Upsala, XIII, 223-226, 4 figs.

—— 1916 D

How the mammal came into existence.

Bull. Geol. Instn. Upsala, XIII, 413-414.

—— 1917 A

Über die Stegocephalen *Tertrema* und *Longorhynchus*.

Bull. Geol. Instn. Upsala, XIV, 229-240, pls. xi-xiii, 8 text-figs.

The bibliography presents 14 titles.

Abstract in Neues Jahrb. Min. Geol. Pal., 1918, Ref., 221.

—— 1918 A

Ein Archosaurier aus der Trias Spitzbergens.

Bull. Geol. Instn. Upsala, XVI, 81-85, 4 figs.

There is a bibliography with 9 titles.

—— 1918 B

Über Gehirn und Sinnesorgane bei *Trematapis*.

Bull. Geol. Instn. Upsala, XVI, 86-95, 5 figs.

There are cited 12 works bearing on the subject.

Abstract in Geol. Zentralbl., XXIII, 478.

—— 1920 A

Some reptiles from the Niobrara group in Kansas.

Bull. Geol. Instn. Upsala, XVIII, 9-18, pls. ii-iv, 9 text-figs.

Abstracts in Rev. crit. Paléozool., XXV, 57; Geol. Zentralbl., XXV, 467.

Wiman, Carl—Continued 1921 A

Ueber den Beckengürtel bei *Stenopterygius quadricissus.*

Bull. Geol. Instn. Upsala, XVIII, 19-31, pl. v, 8 text-figs.

The bibliography comprises 15 titles.

Abstract in Geol. Zentralbl., XXVII, 477.

—— 1922 A

Ueber den Beckengürtel bei *Stenopterygius quadricissus.*

Palaeont. Zeitschr., IV, 118-119.

—— 1923 A

Discussion on *Desmostylus.*

Palaeont. Zeitschr., V, 225.

—— 1923 B

Über den Beckengürtel der Triasichthyosaurier.

Palaeont. Zeitschr., V, 272-276, 3 figs.

There is a list of 5 papers.

Abstract in Geol. Zentralbl., XXXII, 119.

—— 1924 A

Aus dem Leben der Flugsaurier.

Bull. Geol. Instn. Upsala, XIX, 115-127, 1 fig.

There are 13 titles in the bibliography.

Abstracts in Rev. crit. Paléozool., XXVIII, 104, 1924; Geol. Zentralbl., XXX, 540.

—— 1925 A

Ueber *Pterodactylus westmani* und andere Flugsaurier.

Bull. Geol. Instn. Upsala, XX, 1-38, 2 pls., 23 text-figs.

The bibliography presents 25 titles.

Abstract in Geol. Zentralbl., XXXII, 348.

—— 1925 B

Über einige Flugsaurier.

Palaeont. Zeitschr., VII, 15-20, 1 fig.

Followed by Spillman, Abel, Pompeckj, and Reck in discussion.

Winans, Walter 1916 A

[Letter on Gilmore's restoration of extinct reptiles.]

Scient. Amer. Suppl., No. 2098, 187.

Winchell, Alexander 1861 A

First biennial report of the progress of the geological survey of Michigan embracing observations on the geology, zoology, and botany of the lower peninsula. Lansing, 1861.

—— 1870 A

Notes on some Post-Tertiary phenomena in Michigan.

Amer. Naturalist, IV, 504-505.

Read at the Amer. Assoc. Adv. Sci. at Troy. Records finding of *Castoroides,* mammoth and mastodon.

Winchell, Newton H. 1874 A

Report on the geology of Crawford County [Ohio].

Geol. Surv. Ohio, II, pt. 1, 236-252, with map.

—— 1874 B

Report on the geology of Putnam County [Ohio].

Geol. Surv. Ohio, II, pt. i, 388-396, and map.

—— 1878 A

Primitive man at Little Falls.

Rep. Geol. Nat. Hist. Surv. Minn., VI, 53-64.

Contains mention of mastodon and elephant.

—— 1880 A

Castoroides ohioensis Foster.

Rep. Geol. Nat. Hist. Surv. Minn., VIII, 181-183, with plates.

—— 1882 A

The Museum [of University of Minnesota].

Rep. Geol. Nat. Hist. Surv. Minn., X, 145-148.

Elephant's teeth from Montana.

—— 1885 A

Fossil elephant in Winona County [Minn.].

Rep. Geol. Nat. Hist. Surv. Minn., XIII, 147-149.

—— 1888 A

The geology of Hennepin County [Minn.].

Final Rep. Geol. Surv. Minn., II, 264-344, with map and plates.

On page 306 is account of remains of *Castoroides ohioensis.*

—— 1888 B

Mastodon and man in Washington County [Minn.].

Final Rep. Geol. Surv. Minn., II, 397-398.

Tusk of mastodon supposed to be associated with pottery.

—— 1903 A

Was man in America in the Glacial period?

Bull. Geol. Soc. Amer., XIV, 133-152, 1 text-fig.

—— 1905 A

Review of papers by Netta C. Anderson and Johann A. Udden.

Amer. Geologist, XXXVI, 258-261.

Winchell, Newton H.—Cont'd 1907 A

Pre-Indian inhabitants of North America.

Records of the Past, VI, 145-157; 163-181, with illustrations.

A bibliography appended cites the writings of 23 authors.

—— 1910 A

Extinct Pleistocene mammals of Minnesota.

Bull. Minn. Acad. Nat. Sci., IV, 414-422, pls. x, xi.

Abstract in Geol. Centralbl., XVII, 37.

—— 1917 A

The antiquity of man in America compared with Europe.

Bull. Minn. Acad. Sci., V, 121-151, 20 text-figs., and a prefatory note by the officers of the Academy.

Winckler, T. C. 1871 B

Mémoire sur le *Belonostomus pygmæus* et deux espèces de *Caturus*.

Arch. Mus. Teyler, III, 173-186, 1 pl.

—— 1876 A

Mémoire sur quelques restes de poissons du system heersien.

Arch. Mus. Teyler, IV, 1-15, pls. i, ii.

Wincza, H. 1890 A

Über ein transitorisches Rudiment einer knöchernen Clavicula bei Embryonen eines Ungulaten.

Morphol. Jahrb. XVI, 647-651, pl. xxiv.

Windle, Bertram, C. A. 1890 A

On some cranial and dental characters of the domestic dog.

Proc. Zool. Soc. Lond., 1890, 5-29.

—— 1905 A

Einige neuere Beobachtungen über Fingerabnormitäten. Polydactylie, Hyperphalangie.

Anat. Hefte. Ergebn., XIV, 1049-1065.

The bibliography presents 45 titles.

Winge, Herluf 1895 A

See Hay, O. P., 1902 A, page 242.

Abstract by Schlosser in Neues Jahrb. Min. Geol. Pal., 1898, II, Ref., 507-509.

—— 1896 A

Carnivores fossiles et vivants de Lagoa Santa, Minas Géraës, Brésil.

E. Mus. Lund., II, pt. IV, 105-130.

—— 1904 A

Om jordfundne Pattedyr fra Danmark.

Vid. Medd. nat. For. Kjobenh., 1904, 193-304, pls. vii-xiii.

Winge, Herluf—Continued 1906 A

Jordfunde og nulevende Hovdyr (Ungulata) fra Lagoa Santa, Minas Geraes, Brasilien, Med Udsigt over Hovdyrenes indbyrdes-Slaegtskab.

E. Mus. Lund., III, pt. 1, 1-239.

There are numerous references to the literature of the subject.

Abstract in Neues Jahrb. Min. Geol. Pal., 1907, II, 134-136.

—— 1910 A

Om *Plesiocetus* og *Squalodon* fra Danmark.

Vid. Medd. nat. For. Kjobenh., 1909 (1910), 1-38, pls. i, ii.

Abstract in Geol. Centralbl., XVI, 116.

—— 1915 A

Jordfunde og nulevende Gumlere (Edentata) fra Lagoa Santa, Minas Geraes, Brasilien. Med Udsigt over Gumlernes indbyrdes Slaegtskab.

E. Mus. Lundii, III, pt. 2, 1-321, pls. i-xlii.

On pages 261-313 are found notes and references to the works of authors who have written on the subject.

—— 1917 A

Udsigt over Insectaedernes indbyrdes Slaegtskab.

Vid. Medd. nat. For. Kjobenh., LXVIII, 83-203.

There are numerous references to the literature of the subject.

—— 1919 A

Udsigt over Hvalernes Slaegtskab.

Vid. Medd. nat. For. Kjobenh., LXX, 59-142.

There are copious citations of the literature of the subject. See Winge and Miller, 1921 A.

—— 1923 A

Pattedyr-Slaegter. I: Monotremata, Marsupialia, Insectivora, Chiroptera, Edentata.

Copenhagen, 1923, i-viii+1-360 pages, pl. iii.

There are numerous references to the literature of the subject.

—— 1924 A

Pattedyr-Slaegter. II: Rodentia, Carnivora, Primates.

8vo., Copenhagen, 1-321 pages.

Pages 92 to 172, 214 to 241, 279 to 309 are occupied by notes and by abstracts of the systematic literature.

Winge, Herluf, and G. S. **Miller**—Continued 1921 A

A review of the interrelationships of the Cetacea.

Smithson. Misc. Coll., LXXII, No. 8, 1-97.

A translation, made by Gerrit S. Miller, of Winge's paper "Udsigt over Hvalernes indbyrdes Slaegtskab." Winge's paper was published, 1918, in Vid. Medd. nat. For. Kjobenh., vol. LXX, 59-142 (Winge H., 1919 A). In the "Notes," pages 47-93, are numerous references to the literature.

Reviewed in Jour. Mamm., II, 240.

Winslow, C. F. 1875 A

Remarks on fossil mammalian remains in San Francisco.

Proc. Calif. Acad. Sci. (1), VI, 141.

Winslow, Guy Monroe 1898 A

The chondrocranium in the Ichthyopsida.

Tufts Coll. Stud., No. 5, 147-201, pls. i-iv.

There is a bibliography of 72 titles.

Winton, W. E. de 1897 A

Remarks on the existing forms of giraffe.

Proc. Zool. Soc. Lond., 1897, 273-283, figs. 1-4.

With numerous citations of the literature.

Wintrebert, P. 1910 A

Sur le déterminisme de la métamorphose chez les amphibiens.

C. R. Soc. Biol., LXVIII.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, 89-91, 300-302, 419-420, 1081-1083.

—— 1910 B

Sur le déterminisme de la métamorphose chez les batraciens.

C. R. Soc. Biol., LXIX, 78-80, 129-131, 172-174, 226-228.

Abstract in Jahresber. Anat. Entwickl. (N.F.), XVI, 89-91.

Wissler, Clark 1916 A

The present status of the antiquity of man in North America.

Scient. Monthly, II, 234-238.

Witter, F. M. 1880 A

Some geological features near Muscatine.

Proc. Iowa Acad. Sci., 1875-1880, 16.

Read May 24, 1878. Mentions finding of almost entire remains of *Rangifer caribou* in the loess at Muscatine.

—— 1890 A

Some additional observations on the loess in and about Muscatine.

Proc. Iowa Acad. Sci., 1887 (1889), 45.

Witter, F. M.—Continued 1892 A

Notice of arrow points from the loess in the city of Muscatine.

Proc. Iowa Acad. Sci., 1890-91, 66-68.

Mentions finding of remains of two American reindeer and the antlers of some species of deer in loess; also tooth of elephant.

—— 1892 B

Arrow points from the loess at Muscatine, Iowa.

Amer. Geologist, IX, 276-277.

Wood, Horace Elmer 1923 A

The problem of the *Uintatherium* molars.

Bull. Amer. Mus. Nat. Hist., XLVIII, 599-604, 4 figs.

Abstract in Geol. Zentralbl., XXX, 440.

—— 1924 A

The position of the "sparassodonts": with notes on the relationships and history of the Marsupialia.

Bull. Amer. Nat. Hist., LI, 77-101, 2 tab'es, 57 figs.

The bibliography contains 21 titles.

—— 1926 A

Some early Tertiary rhinoceroses and hyracodonts.

Bull. Geol. Soc. Amer., XXXVII, 238-239 (Abstract).

—— 1927 A

Hoplophoneus mentalis, and cusp homologies in cats.

Jour. Mamm., VIII, 296-302.

The bibliography presents 28 titles.

—— 1927 B

Some early Tertiary rhinoceroses and hyracodonts.

Bull. Amer. Pal., XIII (No. 50), 3-89, pls. i-vii, 8 tables.

The bibliography presents 74 titles.

Wood, Norman A. 1914 A

Two undescribed specimens of *Castoroides ohioensis* Foster from Michigan.

Science (n.s.), XXXIX, 759.

Woodhull, A. A. 1872 B

Discovery of the tusk of an elephant in Colorado.

Amer. Jour. Sci. (3), III, 373-374.

See Berthoud, E. L., 1872 A.

Wood-Jones, F. 1920 A

Discussion on the zoological position and affinities of *Tarsius.*

Proc. Zool. Soc. Lond., 1919 (1920), 491-494.

Woodruff, Elmer Grant 1906 A

The geology of Cass County, Nebraska.

Neb. Geol. Surv., II, 169-292, pls. i-xx, 33 text-figs.

A list of the remains of sharks is presented and figures of most of them.

Woodward, A. Smith 1887 B

Abstract in Geol. Mag. (3), IV, 90.

—— 1888 I

Abstract and list in Geol. Mag. (3), V, 139-142.

—— 1888 K

Note on the early Mesozoic ganoid *Belonorhynchus*, and on the supposed Liassic genus *Amblyurus*.

Ann. Mag. Nat. Hist. (6), I, 354-356.

—— 1888 L

On some remains of *Squatina cranei* sp. nov., and the mandible of *Belonostomus cinctus* from the Chalk of Sussex.

Quart. Jour. Geol. Soc., XLIV, 144-148, pl. vii.

—— 1888 M

On two new lepidotid ganoids from the early Mesozoic deposits of Orange Free State, South Africa.

Quart. Jour. Geol. Soc., XLIV, 138-143, 270, pl. vi.

—— 1888 N

Dr. Georg Baur on fossil Chelonia.

Geol. Mag. (3), V, 373.

—— 1888 O

Remarks on a note by G. Baur on the pleurodiran chelonians.

Ann. Mag. Nat. Hist. (6), II, 352-354.

—— 1889 I

Notes on the teeth of sharks and skates from the English Eocene formations.

Proc. Geol. Assoc. XVI, 1-14, pl. i, 2 text-figs.

—— 1889 J

On the so-called Cretaceous lizard, *Rhaphiosaurus*.

Ann. Mag. Nat. Hist. (6), IV, 350-351.

In the bibliography 9 titles are cited.

—— 1889 K

On the occurrence of the Devonian ganoid *Onychodus* in Spitzbergen.

Ann. Mag. Nat. Hist. (6), IV, 407.

Woodward, A. Smith—Cont'd 1890 E

Review of J. S. Newberry's "Triassic fishes and fossil plants of the Triassic rocks of New Jersey and the Connecticut Valley." Newberry, J. S., 1888 A.

Nature, XLII, 366-367.

—— 1890 F

Review of J. S. Newberry's "The palæozoic fishes of North America." Newberry, J. S., 1889 A.

Nature, XLIII, 146-147.

—— 1890 G

The fossil sturgeon of the Whitby Lias.

Naturalist, 1890, 101-107, 8 figs.

—— 1890 H

On two groups of teeth of the Cretaceous selachian fish *Ptychodus*.

Rep. Yorksh. Philos. Soc., 1889 (1890), 38-41, pl. 1.

—— 1891 A

Review in Geol. Mag. (3), VIII, 123-129.

—— 1891 E

The hybodont and cestraciont sharks of the Cretaceous period.

Proc. Yorksh. Geol. Polyt. Soc. (n.s.), XII, 62-68, pls. i, ii.

—— 1891 F

The Devonian fish-fauna of Spitzbergen.

Ann. Mag. Nat. Hist. (6), VIII, 1-15, pls. i-iii.

—— 1891 G

Pholidophorus germanicus: An addition to the fish fauna of the Upper Lias of Whitby.

Geol. Mag. (3), VIII, 545-546.

—— 1892 H

Doubly armoured herrings.

Ann. Mag. Nat. Hist. (6), X, 412-413.

—— 1892 I

Description of the Cretaceous sawfish *Sclerorhynchus atavus*.

Geol. Mag. (3), IX, 429-534, 1 fig.

—— 1893 F

Some Cretaceous fishes.

Ann. Mag. Nat. Hist. (3), X, 433-436, 487-493, plates xvi, xvii.

Woodward, A. Smith—Cont'd 1894 C

On some fish-remains of the genera *Portheus* and *Cladocyclus* from the Rolling Downs formation (Lower Cretaceous) of Queensland.

Ann. Mag. Nat. Hist. (6), XIV, 444-447.

Abstract in Neues Jahrb. Min. Geol. Pal., 1898, II, Ref., 329.

—— 1895 F

On the development of the teeth in certain Insectivora (Abstract).

Rep. Brit. Assoc. Adv. Sci., LXV, Ipswich, 1895, 736.

—— 1895 G

A synopsis of the remains of ganoid fishes from the Cambridge Greensand.

Geol. Mag. (4), II, 207-214, pl. viii, 4 text-figs.

—— 1896 D

On the quadrate bone of a gigantic pterodactyl discovered in the Cretaceous of Bahia, Brazil.

Ann. Mag. Nat. Hist. (6), XVII, 255-257.

—— 1896 E

Note on the affinities of the English Wealden fish-fauna.

Geol. Mag. (4), III, 69-71.

—— 1897 B

The ostracoderms of Professor Cope.

Nat. Sci., XI, 144.

—— 1897 C

Edward Drinker Cope.

Nat. Sci., X, 377-381, with portrait.

—— 1897 D

On a new specimen of stegocephalan, *Ceraterpeton galvani* Huxley, from the Coal measures of Castlecomer, Kilkenny, Ireland.

Geol. Mag. (4), IV, 293-298, pl. xii. Abstract in Neues Jahrb. Min. Geol. Pal., 1898, II, Ref., 333.

—— 1897 E

On a new specimen of the Mesozoic ganoid fish *Pholidophorus* from the Oxford Clay of Weymouth.

Proc. Dorset Nat. Hist. Antiquar. Field Club, XVIII, 150-152, with plate.

—— 1898 B

Reviewed in Sci. Progress, VII, App., xli-xlv; Geol. Mag. (4), V, 367-373.

—— 1898 C

The antiquity of the deep-sea fish-fauna.

Nat. Sci., XII, 257-260, pl. x.

Abstract in Rev. crit. Paléozool., IV, 111-112.

Woodward, A. Smith—Cont'd 1898 D

The history of the Mammalia in Europe and North America.

Nat. Sci., XII, 328-336.

—— 1898 E

The imperfection of the geological record.

Nat. Sci., XIII, 327-332.

—— 1898 F

Preliminary note on a new specimen of *Squatina* from the lithographic stone of Nusplingen, Würtemberg.

Geol. Mag. (4), V, 289-291, pl. x, 1 text-fig.

—— 1898 G

Note on a Devonian cœlacanth fish.

Geol. Mag. (4), V, 529-531, 1 fig.

—— 1898 H

Notes on some type specimens of Cretaceous fishes from Mount Lebanon, in the Edinburgh Museum of Science.

Ann. Mag. Nat. Hist. (7), II, 405-414.

—— 1899 C

On the Cretaceous fish *Plethodus*.

Ann. Mag. Nat. Hist. (7), III, 353-361, pls. xiii, xiv.

—— 1899 D

The supposed existing ground-sloth of Patagonia.

Nat. Sci., XV, 351-354.

—— 1899 E

Note on *Scapanorhynchus*, a Cretaceous shark apparently surviving in Japanese seas.

Ann. Mag. Nat. Hist. (7), III, 487-489.

Abstract in Rev. crit. Paléozool., IV, 115.

—— 1899 F

A supposed existing ground-sloth in Patagonia.

Geol. Mag. (4), VI, 226-228.

—— 1900 B

Abstract in Geol. Centralbl., I, 603.

—— 1900 E

Report upon fish remains.

Summ. Rep. Geol. Surv. Canada for 1899, 203-204.

—— 1900 F

Helicoprion—spine or tooth?

Geol. Mag. (4), VII, 33-36.

—— 1900 G

On some remains of *Grypotherium (Neomylodon) listai* and associated mammals from a cavern near Consuelo Cave, Last Hope Inlet, Patagonia.

Proc. Zool. Soc. Lond., 1900, 64-79, pls. v-ix.

Woodward, A. Smith—Cont'd 1900 H

Notes on some upper Devonian fish-remains discovered by Prof. A. G. Nathorst in East Greenland.

Bihang svenska Vet. Akad. Handl., XXVI, Afd. IV, No. 10, 1-16, 1 pl.

Abstracts in Geol. Centralbl., X, 729; Rev. crit. Paléozool., IX, 189.

—— 1901 A

Catalogue of the fossil fishes in the British Museum. Part IV: Containing the actinopterygian Teleostomi of the suborders Isospondyli (in part), Ostariophysi, Apodes, Percesoces, Hemibranchii, Acanthopterygii, and Anacanthini.

8vo., i-xxxviii+1-636 pages, pls. i-xix, 22 text-figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1905, II, Ref., 134-136; Geol. Centralbl., II, 667-669.

Review in Rev. crit. Paléozool., VI, 59-65; Geol. Mag. (4), IX, 133-138.

—— 1901 B

On some extinct reptiles from Patagonia, of the genera *Miolania*, *Dinilysia*, and *Gonyodectes*.

Proc. Zool. Soc. Lond., 1901, 169-184, pls. xv-xx.

—— 1901 C

Notes on fossil fishes found in the Knoydart formation, Nova Scotia.

Bull. Geol. Soc. Amer., XII, 311-312.

—— 1902 A

Description and comparison of the specimen [of *Grypotherium*].

Pritchard's "Through the heart of Patagonia," pp. 305-330; with 2 figures.

Describes and figures the skin of a mylodont found in cave in Patagonia.

—— 1902 B

On two skulls of the ornithosaurian *Rhamphorhynchus*.

Ann. Mag. Nat. Hist. (7), IX, 1-5, pl. i.

—— 1902 C

On an amioid fish *(Megalurus mawsoni* sp. n.) from the Cretaceous of Bahia, Brazil.

Ann. Mag. Nat. Hist. (7), IX, 87-89, pl. ii.

—— 1902 D

Report on fish remains.

Rep. Geol. Surv. Canada, 1899, XII, 203.

Woodward, A. Smith—Cont'd 1902 E

Note sur l'*Helicoprion* et les "édestides."

Bull. Soc. belge Géol. (2), XIII, Proc.-verb., 230-234, fig. 4.

Followed by discussion by Van de Wielle, Kemna, Dubois, and Simoens.

—— 1903 A

The new mammoth at St. Petersburg.

Nature, LXVIII, 297-298, 2 text-figs.

—— 1903 B

The mammoth.

Geol. Mag. (4), X, 361-363.

A review of three papers on the mammoth found on the Beresowka River in Siberia.

—— 1903 C

On the Carboniferous ichthyodorulite *Listracanthus*.

Geol. Mag. (4), X, 486-488, 9 text-figs.

—— 1904 A

On the jaws of *Ptychodus* from the Chalk.

Quart. Jour. Geol. Soc., LX, 133-136, pl. xv, 1 text-fig.

Abstracts in Geol. Centralbl., V, 484; Rev. crit. Paléozool., VIII, 159.

—— 1904 B

On the jaws of *Ptychodus* from the Chalk.

Geol. Mag. (5), I, 139-140.

Abstract of Woodward, A. S., 1904 A.

—— 1904 C

Some recent discoveries concerning the teeth of extinct animals.

Trans. Odont. Soc. G. Brit. (n.s.), XXXVI, 185-198, 6 text-figs.

—— 1904 D

On two new labyrinthodont skulls of the genera *Capitosaurus* and *Aphaneramma*.

Proc. Zool. Soc. Lond., II, 170-176, pls. xi, xii, text figs.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1907, I, Ref., 150; Jahresber. Anat. Entwickl. (N.F.), X, Abth. 3, 162.

—— 1905 A

On parts of the skeleton of *Cetiosaurus leedsi*, a sauropodous dinosaur from the Oxford Clay of Peterborough.

Proc. Zool. Soc. Lond., 1905, I, 232-243, text-figs. 39-49.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1910, I, Ref., 462; Rev. crit. Paléozool., XI, 12.

—— 1906 A

The relations of palæontology to biology.

Ann. Mag. Nat. Hist. (7), XVIII, 312-318.

Abstract in Rev. crit. Paléozool., XI, 95-97.

Woodward, A. Smith—Cont'd 1906 B

On two specimens of Ichthyosaurus showing contained embryos.

Geol. Mag. (5), III, 443-444, pl. xxiv.

Abstracts in Rev. crit. Paléozool., XI, 76; Geol. Centralbl., IX, 137; Sci. Progress, I, 459.

—— 1906 C

The study of fossil fishes.

Proc. Geol. Assoc., XIX, 266-282, figs. 1-15.

Abstracts in Nature, LXXIV, 597-599, figs. 1-3; Geol. Centralbl., VIII, 751-752; Rev. crit. Paléozool., XI, 77-82.

—— 1906 D

On a Carboniferous fish fauna from the Mansfield District, Victoria.

Mem. Nat. Mus. Melbourne, No. 1, 1-32, pls. i-xi, 3 text-figs.

—— 1907 A

Notes on some Upper Cretaceous fish-remains from the provinces of Sergipe and Pernambuco, Brazil.

Geol. Mag. (5), IV, 193-197, pl. vii.

—— 1907 B

On a new dinosaurian reptile (*Scleromochlus taylori* gen. et sp. nov.) from the Trias of Lossiemouth, Elgin.

Quart. Jour. Geol. Soc., LXIII, 140-144, pl. ix, 1 text-fig.

Abstract in Sci. Progress, II, 515.

—— 1907 C

On *Rhynchosaurus articeps* (Owen).

Rep. Brit. Assoc. Adv. Sci., 1903 (1904), York meet., 293-298, pls. i, ii, 1 fig.

—— 1908 A

On some fossil fishes discovered by Prof. Ennes de Souza in the Cretaceous formation at Ilhéos (State of Bahia), Brazil.

Quart. Jour. Geol. Soc., LXIV, 358-362, pls. xlii, xliii.

—— 1909 A

The British Association for the Advancement of Science. Address of the President to the Geological Section.

Science (n.s.), XXX, 321-331.

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—— 1910 A

On a skull of *Megalosaurus* from the Great Oolite of Minchinhampton (Gloucestershire).

Quart. Jour. Geol. Soc., LXVI, 111-115, pl. xiii.

Abstract in Geol. Centralbl., XV, 413.

Woodward, A. Smith—Cont'd 1910 B

Presidential address at meeting of British Association for Advancement of Science, at Winnipeg, Canada.

Rep. Brit. Assoc. Adv. Sci., LXXIX, Winnipeg, 1909, 462-471.

—— 1910 C

Some extinct vertebrate animals from North America.

Nature, LXXXIV, 12-13, 2 figs.

A review of collected papers from the Bull. Amer. Nat. Hist. from 1904-1908 (vol. III).

—— 1910 D

Origin of vertebrates.

Proc. Linn. Soc. Lond., CXXII, 31.

—— 1911 A

On some mammalian teeth from the Wealden of Hastings.

Quart. Jour. Geol. Soc., LXVII, 278-281, 1 text-fig.

Abstract in Nature, LXXXVI, 233.

—— 1911 B

On the upper Devonian ostracoderm *Psammosteus taylori*.

Ann. Mag. Nat. Hist. (8), VIII, 649-652, pl. ix.

Abstracts in Geol. Centralbl., XVIII, 474; Neues Jahrb. Min. Geol. Pal., 1913, I, 164.

—— 1911 C

Fauna of the Carboniferous period.

Proc. Linn. Soc. Lond., sess., CXXIII, 45-46.

Also in Nature, LXXXVI, 541.

—— 1912 A

The fishes of the English chalk.

Palaeontogr. Soc. London, vols. for years 1902, 1903, 1907, 1908, 1909, 1910, 1911.

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Abstracts in Jahresber. Anat. Entwickl. (N.F.), VIII, pt. 3, 90; Neues Jahrb. Min. Geol. Pal., 1912, II, Ref., 448-452; XVIII, 140-141; Sci. Progress, III, 22.

—— 1912 B

Note on a maxilla of *Triconodon* from the Middle Purbeck beds of Swanage.

Proc. Geol. Assoc., XXIII, 100-101, pl. xv.

Woodward, A. Smith—Cont'd 1912 C

On the snout of a pachycormid fish (*Protosphyræna stebbingi*) from the Lower Chalk of Ferriby, Lincolnshire.

Naturalist, 1912, 329-330, pl. xix.

Abstract in Geol. Centralbl., xix, 44.

—— 1913 A

On a new specimen of the Cretaceous fish *Portheus molossus* Cope.

Geol. Mag. (5), x, 529-531, pl. xviii.

Abstract in Geol. Zentralbl., xxi, 267.

—— 1913 B

Note on fish remains from the Upper Devonian.

Quart. Jour. Geol. Soc., lxix, 81-83, pl. x.

Abstract in Neues Jahrb. Min. Geol. Pal., 1923, i, 455.

—— 1915 A

On the skull of an extinct mammal related to *Æluropus* from a cave in the ruby mines at Mogok, Burma.

Proc. Zool. Soc. Lond., 1915, 425-428, pl. i, 1 text-fig.

—— 1915 B

The use of fishes in stratigraphical geology.

Quart. Jour. Geol. Soc., lxxi, lxii-lxxv.

Abstract in Geol. Zentralbl., xxvi, 253.

—— 1916 A

On a mandibular ramus from an Upper Cretaceous formation in Alberta, Canada.

Proc. Zool. Soc. Lond., 1916, abstract 158, 30.

Describes *Cimolestes cutleri* n. sp.

—— 1916 B

On a mammalian mandible (*Cimolestes cutleri*) from an Upper Cretaceous formation in Alberta, Canada.

Proc. Zool. Soc. Lond., 1916, 525-528.

—— 1917 A

Note on *Plectrodus*, the jaw of an Upper Silurian fish.

Geol. Mag. (6), iv, 74-75.

Abstract in Geol. Zentralbl., xxvi, 381.

—— 1917 B

Notes on the pycnodont fishes.

Geol. Mag. (6), iv, 385-389, pl. xxiv, 1 text-fig.

Abstracts in Geol. Zentralbl., xxvi, 381; Sci. Progress, xii, 421.

—— 1917 C

The so-called coprolites of ichthyosaurians and labyrinthodonts.

Geol. Mag. (6), iv, 540-542, pl. xxxiv, 1 text-fig.

Abstract in Geol. Zentralbl., xxvi, 379.

Woodward, A. Smith—Cont'd 1917 D

The use of the higher vertebrates in stratigraphical geology.

Quart. Jour. Geol. Soc., lxxii, Proc., lxv-lxxvi.

Abstract in Nature, xcvii, 93.

—— 1917 E

Exhibition of specimen of *Cœlorhynchus* from Nigeria.

Quart. Jour. Geol. Soc., lxxii, Proc., lxxviii.

—— 1917 F

On a new species of *Edestus* from the Upper Carboniferous of Yorkshire.

Quart. Jour. Geol. Soc., lxxii, 1-5, 6, pl. i, 4 text-figs.

Description of *Edestus newtoni*.

For preliminary description see Nature, xcviii, 162; Geol. Mag. Lond. (6), iii, 381.

Abstracts in Neues Jahrb. Min. Geol. Pal., 1921, i, Ref., 351; Geol. Zentralbl., xxvi, 123; Sci. Progress, xii, 420.

—— 1917 G

Devonian fish-remains from Australia and the Antarctic regions.

Quart. Jour. Geol. Soc., lxxii, lxxix-lxxx.

—— 1918 A

Rostral teeth of *Eopristis* and *Pristis*.

Proc. Zool. Soc. Lond., 1918, 194-195.

—— 1919 A

The fossil fishes of the English Wealden and Purbeck formations.

Palaeontogr. Soc. London, vol. for 1917, 1-148, pls. i-xxvi and 41 text-figs.

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Abstract of Pt. II in Geol. Mag. (6), v, 417.

—— 1919 B

On the dentition of the petalodont shark *Climaxodus*.

Geol. Mag. (6), vi, 379-380.

—— 1920 A

American fossil vertebrate animals.

Nature, cv, 117-118, 1 fig.

—— 1920 B

On the dentition of the petalodont shark *Climaxodus*.

Quart. Jour. Geol. Soc., lxxv, 1-5, pl. i.

Abstract in Neues Jahrb. Min. Geol. Pal., 1921, i, Ref., 352.

—— 1920 C

Discussion on the zoological position and affinities of *Tarsius*.

Proc. Zool. Soc. Lond., 1919 (1920), 465.

Woodward, A. Smith—Cont'd 1920 D
On certain groups of fossil fishes.
Proc. Linn. Soc. Lond., sess. CXXXII, 25-34, 4 figs.
Bibliography in footnotes.
Abstract in Neues Jahrb. Min. Geol. Pal., 1923, I, 454.

—— 1921 A
Recent progress in the study of fossil fishes.
Proc. Geol. Assoc., XXXII, 179-181, figs. 20, 21.

—— 1921 B
Observations on some extinct elasmobranch fishes.
Proc. Linn. Soc. Lond., sess. CXXXIII, 29-39, 4 figs.
Abstracts in Geol. Zentralbl., XXVII, 363; Neues Jahrb. Min. Geol. Pal., 1923, I, 453.

—— 1921 C
Visit to the gallery of fossil fishes. British Museum (Natural History).
Proc. Geol. Assoc., XXXII, 179-181, 2 figs.

—— 1922 A
A supposed ancestral man in North America.
Nature, CIX, 750.

—— 1922 B
Observations on crossopterygian and arthrodiran fishes.
Proc. Linn. Soc. Lond., sess. CXXXIV, 27-36, 5 figs.
The bibliography is in footnotes.
Abstract in Neues Jahrb. Min. Geol. Pal., 1923, I, 453.

—— 1922 C
A guide to the fossil reptiles, amphibians, and fishes in the department of geology and palæontology in the British Museum of Natural History.
London, 10th ed., i-xvi+1-112 pages, 8 pls., 117 text-figs.
Abstract in Rev. crit. Paléozool., XXVII, 219.

—— 1923 A
Presidential address. Palæontology and Evolution.
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—— 1923 B
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Naturalist, Sept., 1923, 297-300, 1 fig.

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A guide to the fossil mammals and birds in the department of geology and palæontology in the British Museum (Natural History).
Pages 1-96, 6 pls., 86 text-figs.

—— 1924 A
The animals of the Carboniferous period, with special reference to the discoveries in Yorkshire.
Naturalist, 1924, 105-117, 8 figs.

—— 1924 B
On a hybodont shark (*Tristychius*) from the Calciferous sandstone series of Eskdale (Dumfries-shire).
Quart. Jour. Geol. Soc., LXXXI, 338-342, 1 fig.
Abstracts in Geol. Zentralbl., XXX., 416; Neues Jahrb. Min. Geol. Pal., 1925, I, 283.

—— 1925 A
The oldest fossil fishes.
Nature, CXV, 124-125, 3 figs.

——, and B. **Petronievics**
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——, and C. D. **Sherborn** 1891 A
A catalogue of British fossil Vertebrata. Supplement for 1890.
Geol. Mag. (3), VIII, 25-34.

——, and Errol Ivor **White** 1926 A
The fossil fishes of the Old Red sandstone of the Shetland Isles.
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On some armoured fishes.
Pop. Sci. Review, XVII (n.s. II), 1-23, pls. i, ii.

—— 1904 A
A retrospect of palæontology in the last forty years.
Geol. Mag. (5), I, 1-6, 49-56, 97-106, 145-157.

—— 1904 B
The evolution of vertebrate animals in time.
Jour. Roy. Micr. Soc., 1904, 137-164.

—— 1906 A
A large-headed dinosaur.
Nature, LXXIII, 228-229, 1 fig.
Abstract in Geol. Zentralbl., VII, 662.

—— 1915 A
Eminent geologists. Arthur Smith Woodward.
Geol. Mag. (6), II, 1-5, with portrait.

Woodward, M. F. 1894 B

On the succession and genesis of mammalian teeth.

Sci. Progress, I, 438-453.

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Woodworth, Jay Backus 1905 A

Ancient water levels of the Champlain and Hudson valleys.

Bull. N. Y. State Mus., LXXXIV, 67-265, pls. i-xxix, 24 text-figs.

—— 1911 A

Report to Professor F. W. Putnam on the geology of vicinity of Trenton, 1899.

Peabody Mus. Amer. Archæol., V, 237-241.

See **Shaler** and **Woodworth.**

Woolman, Lewis 1897 A

Fossil horse in Fish House Clay, *Equus complicatus* Leidy.

Rep. Geol. Surv. New Jersey for 1896, 208-210, pl. x.

—— 1897 B

Vertebrate and invertebrate fossils and also plant remains at Fish House as noted by Prof. H. Carville Lewis.

Rep. Geol. Surv. New Jersey for 1896, 211-212.

Notes the finding of bones of wolf and of fishes.

—— 1897 C

Bone of a dinosaur, an immense reptile, associated with ammonites and other molluscan fossils in Cretaceous Mattawan clay marls, at Merchantville, N. J.

Rep. Geol. Surv. New Jersey for 1896, 248-250, triple plate XV. Reptile supposed by Cope to be *Ornithotarsus immanis.*

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Geol. Surv. Ill., I, 1-152, 278-349.

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Geology of Peoria, McDonough, Monroe, Macoupin, and Sangamon Counties [Illinois].

Geol. Surv. Ill., V, 25-319.

—— 1890 A

Drift deposits of Illinois.

Geol. Surv. Ill., VIII, 1-24.

Worthmann, Fritz 1922 A

Zur Mechanik des Kiefergelenks.

Anat. Anz., LV, 305-316, 6 figs.

Wortman, Jacob L. 1895 B

On the so-called devil's corkscrews of Nebraska.

Amer. Naturalist, XXIX, 403.

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—— 1899 A

Abstract in Geol. Centralbl., I, 636.

—— 1900 A

The new department of vertebrate palæontology of the Carnegie Museum.

Science (n.s.), XI, 163-166.

—— 1901 A

A new American species of *Amphicyon.*

Amer. Jour. Sci. (4), XI, 200-204, figs. A. and B.

Describes *A. americanus* Wortman.

Abstract in Geol. Centralbl., II, 664.

—— 1901 B

Studies of Eocene Mammalia in the Marsh collection, Peabody Museum. Part I: Carnivora.

Amer. Jour. Sci. (4), XI, 333-348, 437-450, XII, 143-154, 193-206, 281-296, 377-382, 421-432, pls. i-viii, 60 text-figs.

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The probable successors of certain North American primates.

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—— 1902 B

Fossils mammals of the Tertiary of northeastern Colorado, by W. D. Matthew.

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A review of W. D. Matthew's memoir with the title quoted.

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Amer. Jour. Sci. (4), xv, 163-176, text-figs. 100-104, 399-414, 419-436; xvi, 345-368, with pls. xvi, xvii, text-figs. 105-119.
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—— 1906 A
A new fossil seal from the marine Miocene of the Oregon coast.
Science (n.s.), xxiv, 89-92.
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Abstract in Geol. Centralbl., xi, 105.

—— 1920 A
On some hitherto unrecognized reptilian characters in the skull of the Insectivora and other mammals.
Proc. U. S. Nat. Mus., lvii, 1-52, 16 figs.

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Amer. Jour. Phys. Anthrop., iv, 177-188.

Wrather, W. E. 1922 A
Dinosaur tracks in Hamilton County, Texas.
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The mastodon and mammoth contemporary with man.
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Distribution of mastodon remains in Ohio.
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Hay, O. P. 1902 A.
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1920 A, 303.
1925 A ("wirbeltiere").
Adams, L. A. 1919 A.
Adloff, P. 1904 B, 54 ("wirbeltiere").
Aichel, O. 1919 A.
Airey, L. B. 1919 A, 59, figs. 1, 2.
Alexander, G. 1904 A ("wirbeltiere").
Anthony, R. 1910 A, 777 ("vertébrés").
1912 A ("vertébrés").
Arldt, T. 1907 D, 688.
Ayers, H. 1906 A, 78.
Baraldi, G. 1877 A, 1-56 ("vertebrati").
Bardeleben, K. 1896 A, 95 ("wirbeltiere").
1905 A, 16 ("wirbeltiere").
1907 A, 34 ("wirbeltiere").
Baur, G. 1885 L.
Beer, G. R. 1926 A, 263-370.
Bender, O. 1910 A, 125 ("vertebraten").
Blainville, H. M. D. 1835 A, 238 (Osteozoa).
Böker, H. 1927 A, 2 ("wirbeltiere").
Bojanus, L. H. 1819 A, 1360 ("wirbelthiere").
Bolk, L. 1915 C, 191.
Bonaparte, C. L. 1838 B, 105.
Bordage, E. 1892 A, 333 ("vertébrés").
Braus, H. 1900 A, 45 ("wirbeltier").
1906 A ("vertebraten").
1909 A.
Burckhardt, R. 1903 A, pt. 3, 77.
1906 A, 154.
Cahall, W. C. 1890 A, 230 ("vertebrates").
Carter, J. T. 1905 A, 125 ("vertebrates").
Carus, V. 1875 A, 26.
Carus and Engelmann 1861 A, 951-966, 1668-1669, 1805, 1817 ("wirbelthiere").
Case, E. C. 1905 E, 179 ("vertebrates").
1909 C, 18 ("vertebrates").
1919 B, 200.
Chaine, J. 1918 A, 733 ("vertébrés").
Chamberlin, T. C. 1900 A, 401 ("vertebrates").
Chapman, H. C. 1894 A, 32 ("vertebrates").
Cleland, J. 1863 A, 116.
1870 A, 119 ("vertebrates").
Cope, E. D. 1885 BB, 60.
1885 EE, 606.
1891 N, 1-90.
Coues, E. 1870 A ("vertebrates").
Cuvier, G. F. 1805 A ("vertébrés").
1812 A, 23 ("vertébrés").
Dean, B. 1902 A, 767 ("vertebrates").
1902 B, 837 ("vertebrates").
1908 A, 202.
1909 B, 816.
Delsman, H. C. 1913 A, 64 ("vertebraten").
1924 A, 151 ("vertebrates").
Deninger, K. 1914 A, 181-214.
1915 A, 181-191.
Dixey, F. A. 1881 A, 64.
Döderlein, L. 1900 B, 48 ("wirbelthiere").
Dohrn, A. 1890 A ("wirbeltiere").
Dollo, L. 1889 E, 146 ("vertébrés").
1892 D, 116 ("vertébrés").
Drüner, L. 1905 A, 152.
Eastman, C. R. 1912 C, 657 ("vertebrates").
1913 B, 676 ("vertebrates").
1915 C, 658 ("vertebrates").
Ebner, V. 1889 A, 194 ("wirbelthiere").
Eisler, P. 1895 A ("vertebraten").
Eternod, A. 1895 A ("animaux").
Filatoff, D. 1906 A, 623 ("wirbeltiere").
Fleischmann, A. 1903 A, 560.
Foote, J. S. 1916 A.
Forster, A. 1905 A, 89-138.
Froriep, A. 1887 A, 815 ("wirbeltiere").
1905 A, 156 ("vertébrés").
Fry, E. 1850 A, 15.
Fuchs, H. 1905 B, 2.
1920 C, 92 ("wirbeltiere").
Gadow, H. 1910 A, 27 ("vertebrates").
Gaskell, W. H. 1890 A, 379 ("vertebrates").
1895 A, 19 ("vertebrates").
1898 A, 513.
1901 A, 224 ("vertebrates").
1905 A, 40 ("vertebrates").
1908 A, 537 ("vertebrates").
1910 A, 91.
Gaupp, E. 1898 B, 798 ("wirbeltiere").
1899 A, 990 ("wirbeltiere").
1905 C, 125 ("wirbeltiere").
1905 E, 159 ("wirbeltiere").
1906 A, 21 ("wirbeltiere").
1906 B, 573 ("wirbeltiere").
1911 C, 433 ("wirbeltiere").
1911 D, 609 ("wirbeltiere").
1912 A, 561 ("wirbeltiere").
1913 A ("wirbeltiere").
Geddes, A. C. 1912 A, 350 ("vertebrates").
Gegenbaur, C. 1870 C, 397 ("wirbeltiere").
Geoffroy-St. Hilaire, E. F. 1807 E, 342 ("vertébrés").
1822 B, 90 ("animaux vertébrés").
Gervais, P. 1853 B, 21-69.
Gill, T. 1873 E, 432, 435.
1898 B, 697 ("vertebrates").
Goette, A. 1895 A, 12 ("wirbelthiere").
Goodrich, E. S. 1910 A, 24 ("vertebrates").
Goodsir, J. 1857 A.
Gray, J. E. 1821 A, 297 (Vertebrosa).
Green, G. R. 1861 A, 218.
Gregory, W. K. 1913 E, 1 ("vertebrates").
1917 D, 623 ("vertebrates").
1927 C, 169 ("vertebrates").
Gregory and Adams 1915 A, 763 ("vertebrates").
Haeckel, E. 1868 A, 393, 433.
Haller, G. 1926 A, 446 ("wirbeltiere").
Hase, A. 1913 A.
Hatschek, B. 1889 A, 82 ("wirbeltiere").
1889 B, 113 ("wirbeltiere").
1893 A, 89 ("wirbeltiere").

Henshaw, H. W. 1912 A, 317 ("vertebrates").
Hertwig, O. 1892 A.
Hilgard, T. C. 1857 A, 98.
1858 A, 81.
1860 A, 678.
Hill, C. 1899 A, 353 ("vertebrates").
1900 A, 392 ("vertebrates").
Hilzheimer, M. 1913 A, 165 ("wirbeltiere").
Hoernes, R. 1886 A, 524.
Hubrecht, A. A. W. 1908 A, 149.
Huene, F. 1908 H, 156-175.
1910 F, 147-163.
1911 G, 145-161.
Humphrey, G. M. 1876 A, 659 ("vertebrates").
Huxley, T. H. 1853 A, 149, 158.
1856 A, 45.
1859 D, 381.
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1863 E, 417, 471.
1863 F, 1, 57, 107, 189, 371, 425, 475, 529, 579, 607, 633, 663.
1869 G, 436.
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1880 E, 457.
Jacobshagen, E. 1920 A, 85 ("wirbeltiere").
Jaekel, O. 1901 B, 52 ("wirbeltiere").
1903 E, 84 ("wirbeltiere").
1906 A, 7 ("wirbeltiere").
1909 A, 200.
1911 A, 12.
1912 A, 609 ("wirbeltiere").
1913 A, 77 ("wirbeltiere").
1918 A, 229 ("wirbeltiere").
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1925 A, 165 ("wirbeltiere").
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1927 B, 342 ("wirbeltiere").
Julien, A. 1894 A, 173 ("vertébrés").
Kerr, J. G. 1900 A, 227 ("vertebrates").
1901 A, 693 ("vertebrates").
1910 A, 203 ("vertebrates").
1923 A, 113.
Kiaer, J. 1928 A ("vertebrates").
Kingsbury and Adelmann 1924 A, 239-341 ("vertebrates").
Kingsley, J. S. 1894 A, 635 ("vertebrates").
1896 A, 136 ("vertebrates").
1900 A, 204 ("vertebrates").
1912 A, 185 ("vertebrates").
Köstlin, O. 1844 A ("wirbeltiere").
Kupffer, C. 1893 A, 513.
Lavocat, A. 1883 A, 1316 ("vertébrés").
1884 A, 1125 ("vertébrés").
1885 A, 23 ("vertébrés").
1889 A, 39 ("vertébrés").
Le Damany, P. 1902 A, 333 ("vertébrés").
1903 A, 273 ("vertébrés").
1903 B, 275 ("vertébrés")
1903 G ("vertébrés").
1906 B, 155 ("vertébrés").
Leydig, F. 1887 A, 534 ("wirbeltiere").
Lubosch, W. E. 1908 A, 192 ("wirbeltiere").
Lull, R. S. 1906 B, 537 ("vertebrates").
1917 B, 460 ("vertebrates").
MacBride, E. W. 1910 A, 15.
Macdonald, W. 1863 A, 49 (Vertebralia, Osteozoa).
McMurrich, J. P. 1912 A, 167.
Matthew, W. D. 1916 C.
1923 B, 107.
Meckel, J. F. 1825 A ("wirbeltiere").
Meek, A. 1907 A, 408 ("vertebrates").
Middleton, J. 1844 A, 285.
Mivart, St. G. 1871 B, 369, 375.
Mivart and Clarke 1879 A, 513.
Mollier, S. 1895 B, 1 ("wirbeltiere").
Müller, F. 1911 A, 335 ("wirbeltiere").
Nauck, E. T. 1926 B, 22.
Noordenbos, W. 1905 B, 367 ("säugetiere").
Nopcsa, F. 1923 B, 350.
1926 A, 634.
Nowikoff, M. 1910 A, 184.
Nunn, E. 1882 A, 156 ("vertebrates").
Osborn, H. F. 1905 N, 235 ("vertebrates").
1916 E, 508 ("vertebrates").
1917 B, 322.
Osburn, R. C. 1907 A, 415.
1907 B, 171 ("vertebrates").
Oswald, F. 1909 A, 123 ("vertebrates").
1911 A, 406.
Owen, R. 1846 E.
1848 B.
1868 A, 914 ("vertebrates").
Parker, W. K. 1887 B, 52.
Parker and Haswell 1897 A, 37.
Patten, W. 1902 B, 180 ("vertebrates").
1925 A, x.
1926 A, 237 ("vertebrates").
Perrier, E. 1898 A, 1479 ("vertébrés").
Peters, W. 1868 B, 388.
Raymond, P. E. 1925 A, 435, 436.
Röse, C. 1892 G, 148 ("vertebraten").
Roule, L. 1892 A, 588 ("vertébrés").
Ryder, J. 1887 A, 344 ("vertebrates").
Sabatier, A. 1902 A, 99 ("vertébrés").
Schauinsland, H. 1906 A, 339 ("vertebraten").
Schenk, F. 1896 A, 213 ("wirbeltiere").
Schlosser, M. 1898 D, 119 ("wirbeltiere").
Seeley, H. G. 1866 B, 345 ("vertebrates").
1872 A, 265.
1872 B, 21.
Sewertzoff, A. 1896 A, 189.
1897 A, 409 ("wirbeltiere").
1904 A, 472.
1926 C, 42 ("wirbeltiere").
Starling, E. H. 1910 A, 20 ("vertebrates").
Steinmann, G. 1907 A, 389-542.
Stephan, P. 1900 A, 283.
Stieda, L. 1897 A ("wirbelthiere").
Stromer, E. 1905 H, 214 ("wirbeltiere").
1912 A.
1920 A, 9 ("wirbeltiere").
Terra, P. 1911 A.
Traquair, R. H. 1900 C, 502.
Veit, O. 1916 A, 368 ("wirbeltiere").
1924 A, 374 ("wirbeltiere").
Vialleton, L. 1917 A, 190 ("vertébrés").
Wallace, A. R. 1876 A, i, 503.
Wagner, R. 1843 A, 9.
Weidenreich, F. 1926 A, 45 ("wirbeltiere").
Wiedersheim, R. 1886 A.
Wilder, B. 1865 A, 56 ("vertebrates").

Wilder, B. 1872 B ("vertebrates").
Williston, S. W. 1909 A, 389 ("vertebrates").
Woodward, A. S. 1910 D, 31 ("vertebrates").
Woodward, H. 1904 B ("vertebrates").
Wyman, J. 1867 B, 248 ("vertebrates").
Ziegler, H. E. 1908 B, 653 ("wirbeltiere").
Ziegler, H. E. 1923 A, 62, figs. 1-7 ("wirbeltiere").
Zittel, K. A. 1901 A, 409.
Zittel and Koken 1911 A.
Zittel and Schlosser 1923 A, 1-705, figs. 1-800.
Zittel and Woodward 1902 A.
Zondek, M. 1895 A, 499 ("wirbeltiere").

Class PLAGIOSTOMI Meckel.

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Unless otherwise indicated, the authors, as quoted, use for this class the name Elasmobranchii. Meckel, as cited, includes under Plagiostomi the genera *Raja*, *Squalus* and *Chimæra*. His name therefore antedates Elasmobranchii of Bonaparte.

Hay, O. P. 1902 A, 262.

Abel, O. 1912 F, 440.
1919 A, 104.
1920 A, 325.
1921 A, 144, 248 ("haifische").

Adloff, P. 1904 B, 54 ("selachier").
1907 A, 532 ("fische").
1915 A, 436 ("selachier").

Agar, W. E. 1907 A, 625 ("elasmobranchs").

Agassiz, L. 1832 A, 141 (Chondropterygii).
1835 I, 99 ("placoidians").
1840 A, 58 ("poissons").
1840 B, 62 ("poissons").
1844 C, 251 ("poissons").
1844 D, 132 ("fishes"); 139 ("placoides").
1844 E, 332 ("placoids").
1856 B, 38 ("plagiostomes").
1858 A, 8 ("selachians").
1859 A, 108 ("fishes").
1874 A, 129 ("selachians").

Allis, E. P. 1903 A, 662.
1905 A, 470.
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1925 A, 75.
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Anderson, R. J. 1914 A, 533 ("selachians").
Anthony, R. 1912 A ("poissons").
Arldt, T. 1923 A, 483 ("elasmobranchier").
Ayers, H. 1906 A, 77 (Selachia).
Backman, G. 1915 A, 14.
Baraldi, G. 1877 A, 7, 44 ("sélaciens").

Bardeleben, K. 1896 A, 114 ("selachier").
1901 A, 28 ("selachier").
1903 A, 20 ("selachier").
1906 A, 139 ("selachier").
1907 B, 154 ("fische").

Barkas, W. J. 1874 D, 542 ("fishes").
Barrell, J. 1915 B, 392 ("fishes").

Baur, G. 1885 L ("vertebrates").
1893 D, 117 ("selachier").

Beer, R. G. 1922 A, 457 ("elasmobranchs").
Belling, D. E. 1912 A, 53 (Selachii).
Bessels, E. 1869 A, 152 ("selachier").
Bluntschli, H. 1912 B, 379 ("selachier").
Boas, J. E. V. 1914 B, 538 ("selachier").
Bolk, L. 1922 B, 68.

Bonaparte, C. L. 1831 A, 98 (Chismopnei. Includes Acipenseridæ, Chimeridæ, Squalidæ, and Rajidæ).
1838 C, 214.
1840 A, 44.

Born, G. 1827 A, 182 ("fische").

Brandt, J. F. 1865 A, 2 ("selachier"); 21 (Pisces, in part).

Braus, H. 1901 A, 177 ("selachier").
1901 B, 174, 194 ("selachier").
1906 A ("selachier").
1906 B, 552 ("chondropterygier").

Bridge, T. W. 1878 A.
1896 A, 533.
1904 A, 431, 739.

Bryant, W. L. 1926 B, 257.

Brohmer, P. 1908 A, 25 (On Spinax).
1909 A, 646 ("selachier").

Bronn, H. G. 1849 A, 636, 781, seq.

Burckhardt, R. 1903 A, 78 ("fische").
1906 A, 156 ("fische").

Cahall, W. C. 1890 A, 232 ("fishes").
Carter, J. T. 1905 A, 129.
Carus, V. 1875 A, 597 (Selachii).
Carus and Engelmann 1861 A, 968-997, 1669-1676, 1788 (Pisces).
Claypole, E. W. 1900 A, 247 ("elasmobranchs").

Cleland, J. 1863 B, 308 ("fishes").
1870 A, 120 ("fishes").

Collinge, W. E. 1894 A, 526.
1895 C, 888.

Cope, E. D. 1885 BB, 64.
1891 N, 10.

Coulon, L. 1903 A, 99 ("poissons").

Cunningham, J. T. 1897 A, 492 ("elasmobranchs").
1912 A, 231-440 ("fishes").

Cuvier, G. 1801 A, 25 ("poissons").
1803 A, 166 ("poissons").
1805 A ("chondroptérygiens").
1814 A, 73 ("poissons").
1815 A, 121 ("chondroptérygiens").

Dana, J. D. 1863 A, 3 ("fishes").
1863 C, 343 ("fishes").

Daniel, J. F. 1922 A.
Davidoff, M. 1879 A, 450 ("fische").

Dean, B. 1895 B, 424 ("sharks").
1900 A, 23, 27.
1903 A, 285 ("elasmobranchs").
1904 C, 437 ("fishes").
1906 B, 155.
1916 A ("fishes").

Dean and Eastman 1916 A.
1917 A.

Deinse, A. B. 1916 A, 417 ("selachier").

Delsman, H. C. 1913 A, 659 ("selachier").
1924 A, 155 ("selachians").

Deninger, K. 1914 A, 183-214 ("fische").
1915 A, 181-183 ("fische").
Dependorf, T. 1907 A, 546 ("fische").
Derjugin, K. 1910 B, 207 ("selachier").
Diener, C. 1909 A, 32 ("fische").
Dietz, P. A. 1917 A, 79.
Dohrn, A. 1884 A ("selachier").
1890 A ("selachier").
Dollo, L. 1889 E, 146 ("poissons").
1889 F, 333 ("élasmobranchs").
1893 D, 5 ("poissons").
1896 A, 110 ("élasmobranches").
1903 D, 701 ("élasmobranches").
1904 C, 47 ("chondroptérygiens").
1906 B, 137 ("chondroptérygiens").
Dombrowsky, B. A. 1918 A, 204.
Drüner, L. 1902 A, 438 ("selachier").
1906 A, 6 ("selachier").
Dugès, A. 1905 A, 107 ("poissons").
Eastman, C. R. 1898 E, 177 ("fishes").
1901 C 329 ("elasmobranchs").
1905 A, 46 ("elasmobranchs").
1907 B, 23.
1908 A, 59, 69, 95 ("elasmobranchs").
1911 A, 20.
1913 B, 677 ("fishes").
1916 A, 655 (Pisces).
1917 A, 254.
Eastman and Barbour 1902 A, 267 ("elasmobranchs").
Ebner, V. 1896 A, 123 ("fische").
Eichwald, E. 1832 A, 876 ("selachier").
Eisler, P. 1895 A, 17 ("fische").
Elliot, A. I. M. 1907 A, 648 ("selachians").
Emery, C. 1895 A, 223 ("sélaciens").
Erdl, M. 1843 A ("fische").
Fahrenholz, C. 1915 A, 389 ("selachier").
Filatoff, D. 1907 A, 338.
Fitzinger, L. J. 1873 A, 53.
Forster, A. 1905 A, 89-138.
Fowler, H. W. 1911 A, 22.
Fraas, E. 1905 B, 354 ("fische").
Froriep, A. 1902 A, 34 ("selachier").
1905 A, 156 ("sélaciens").
1905 B, 111 ("selachier").
Fuchs, H. 1907 C, 24 ("fische").
1909 B, 164 ("selachier").
1909 D, 185 ("selachier").
Fürbringer, K. 1903 A, 360 ("selachier").
Fürbringer, M. 1902 A.
1904 A ("selachier").
Gadow, H. 1910 A, 27 ("elasmobranchs").
Garman, S. 1911 A, 81 (Chondropterygii).
1913 A, 2, 9 (Chondropterygii).
Gaskell, W. H. 1905 A, 41 ("fishes").
1908 A, 23, 343, 423 ("elasmobranchs").
Gaupp, E. 1897 A, 545 ("elasmobranchier").
1898 B ("selachier").
1901 B, 931 ("selachier").
1905 D, 867 ("selachier").
1906 B ("selachier").
1910 C, 338 ("selachier").
1911 E, 338 ("selachier").
1913 A, 23 ("selachier").
Geddes, A. C. 1912 A, 353 ("elasmobranchs").
Gegenbaur, C. 1867 A, 56 ("selachier").
1870 C, 398 ("fische").
Gegenbaur, C. 1871 B ("selachier").
Geoffroy St. Hilaire, E. F. 1807 C, 87 ("poissons").
Giebel, C. G. 1855 A, 114 (Selachii).
Gill, T. 1873 E, 435 ("elasmobranchiates").
1885 A, lxiii ("selachians").
1898 A, 686 ("selachians").
1905 A, 655, 657.
1909 A, 193 ("elasmobranchiates," Chondrophora).
Goetsch, W. 1920 A, 5, 518 ("plagiostomen," "selachier").
Goette, A. 1901 A, 533 ("fische").
Goodrich, E. S. 1904 A, 468, 492.
1906 A ("elasmobranchs").
1908 A, 752 ("elasmobranchs").
1909 A, 118 (Chondrichthyes); 125 (Elasmobranchii).
1924 A, 935 (Chondrichthyes).
Greene, J. R. 1861 A, 227.
Gregory, W. K. 1907 D, 445.
1911 A, 509 ("fishes").
1911 B, 892 ("sharks").
1915 D, 320, 343.
1922 A, 546 ("sharks").
Haeckel, E. 1868 A, 441, 443 (Selachii).
1873 A, 516, 585 (Selachii).
1893 A, xvi ("selachier").
Harrison, R. G. 1893 A, 248 ("selachier").
1895 A, 566 ("selachier").
Hase, A. 1907 A, 655 ("selachier").
1913 A ("fische").
Hasse, C. 1873 B, 629 ("plagiostomen").
1892 B, 519 ("elasmobranchier").
1893 B, 537 ("elasmobranchier").
Hasse and Schwarck 1870 A, 47 ("plagiostomen").
Hatschek, B. 1889 A, 82 ("fische").
1889 B, 114 ("fische").
Hawkes, O. A. M. 1905 A, 82 ("elasmobranchs").
Hay, O. P. 1897 A, 131 ("sharks").
1901 B, 63.
1917 H, 383 ("fishes").
Heckel, J. 1851 A, 219 ("selachier").
Heilprin, A. 1887 A, 299.
Henshaw, H. W. 1912 A, 318 ("fishes").
Hertwig, O. 1892 A.
Hoernes, R. 1886 A, 539 (Chondropterygii).
Hoeven, J. 1822 A (Pisces, in part).
Houssay, F. 1909 A, 617 ("poissons").
1909 B, 943 ("poissons").
1909 C, 1076 ("poissons").
Howes, G. B. 1902 A, 525 ("elasmobranchs").
Hubbs, C. L. 1926 A, 61 ("elasmobranchs").
Huber, O. 1901 A, 592 ("selachier").
Hubrecht, A. A. W. 1908 A, 152; 156 (Chondrophora).
Huene, F. 1907 A, 151-152 ("fische").
1910 F, 147-163 ("fische").
1911 G, 146-151 ("fische").
1926 A, 260.
Hussakof, L. 1910 A, 925 ("selachians").
Huxley, T. H. 1853 A, 150 ("skate").
1859 D, 417.
1859 H, 33.
1861 D. 448.

Huxley, T. H. 1869 G, 452.
1876 E, 103.
1883 B, 571.
Ihering, H. 1878 A, 72 ("fische").
Imms, A. D. 1905 A, 41 (("elasmobranchs").
Jacobshagen, E. 1923 A, 174 ("selachier").
Jaekel, O. 1902 E, 1115 ("plagiostomen").
1903 F, 28 (Pisces, in part); 36, 46 ("selachier").
1906 A, 8 ("selachier").
1906 C, 155 ("selachier").
1909 D, 701 ("fische").
1913 A, 77 ("fische").
1913 B, 194 ("selachier").
1927 A, 253 ("selachier").
Jaquet, M. 1900 A, 60 ("sélaciens").
Johnson, A. 1883 A, 402 ("elasmobranchs").
Jordan, D. S. 1898 A, 173 ("fishes").
1901 A ("fishes").
1902 A, 240 ("fishes").
1905 A, i, 506; ii, 568.
1907 B, 180, 758.
1923 A, 90.
Jordan and Gilbert 1882 A, 12.
Kellicott, W. E. 1905 A, 137.
Kerr, J. G. 1901 A, 694 ("selachians").
1910 A, 203 ("elasmobranchs").
Keyes, C. A. 1922 A, pl. iii.
1924 A, 233 ("fishes").
Kiaer, J. 1924 A, 91, 100, 101, 111.
Kindred, J. E. 1919 A, 27 ("elasmobranchs").
Kingsley, J. S. 1885 A, 68.
1896 A, 147 ("elasmobranchs").
1900 A, 204 ("elasmobranchs").
1901 A, 197 ("sharks").
1912 B ("elasmobranchs").
1925 A, 10, 29, 81, 232 ("elasmobranchs").
Klaatsch, H. 1893 B ("fische").
1893 C, 143 ("fische").
Kner, R. 1860 B, 815 (Plagiostomi).
Koken, E. 1893 B, 640 ("fische").
Kolmer, W. 1923 A, 529 ("selachier").
Krivetski, A. 1917 A, 16 ("sélaciens").
Lavocat, A. 1884 A, 1126 ("poissons").
1896 B, 194 ("poissons").
1897 A, 138 ("poissons").
Le Damany, P. 1902 A, 333 ("poissons").
Leigh-Sharpe, W. H. 1926 A, 307 ("elasmobranchs").
Leunis and Ludwig 1883 A, 779 (Chondropterygii).
Locy, W. A. 1894 A, 171 ("elasmobranchs").
Lönnberg, E. 1901 A.
1902 A.
Lubosch, W. 1909 Å, 1 ("selachier").
Lütken, C. 1868 C (Selachii).
1871 A, 296 ("chondrostéens desmobranches").
Lydekker, R. 1907 C, 464.
M'Donnell, R. 1864 A, 161 ("fishes").
Mantell, G. A. 1844 A, 587, 612 ("sharks, rays").
Meckel, J. F. 1825 A ("plagiostomen").
Meek, A. 1916 A, 34.
Menmuir, W. H. 1902 A, 273.
Miall, L. C. 1872 A, 32.
Mivart, St. G. 1871 B, 378 ("elasmobranchs").
Montgomery, T. H. 1901 A, 21733 ("fishes").
Moodie, R. L. 1915 I, 138 ("selachians").
Mummery, J. H. 1917 A, 264 ("elasmobranchi").
Nauck, E. T. 1926 B, 29 ("chondropterygier").
Ortmann, A. E. 1901 A, 694 ("fishes").
Osborn, H. F. 1916 E, 601 ("sharks, rays").
1917 B, 168, 292.
Osburn, R. C. 1907 B, 174 (Selachii).
Oswald, F. 1911 A, 409 ("elasmobranchs").
Owen, R. 1845 B, 23 ("plagiostomes").
Paramore, R. H. 1910 A, 1393 ("fishes").
Parker, W. K. 1888 C, 399 ("elasmobranchs").
Parker and Haswell 1897 A, 134.
Paterson, A. M. 1902 A, 777 ("elasmobranchs").
Patten, W. 1912 A, 384.
Philippi and Frech 1903 A, 10 ("selachier").
Poche, F. 1911 A, 49 ("selachier").
Pompeckj, J. F. 1913 A, 1120.
1914 A, xcii ("fische").
Priem, F. 1908 B ("elasmobranches").
Rabinerson, A. 1925 A, 434 ("knorpelfische").
Rabl, C. 1901 A, 475 ("selachier").
Radcliffe, L. 1916 A, 243 (Chondropterygia).
1917 A, 26 ("sharks").
Rauther, M. 1913 A, 1097.
Regan, C. T. 1904 A, 329 (Chondropterygii).
1906 A, 722 (Selachii).
1908 D, 347 ("selachians").
1909 B, 75 (Selachii).
1923 B, 459 ("selachians").
Reis, O. M. 1894 A, 50 ("elasmobranchier").
1894 B, 87 ("fische").
Reynolds, S. H. 1897 A, 62, 104, 117, 124, 127, 539.
Ridewood, W. G. 1895 B ("elasmobranchs").
1896 A, 380 ("fishes").
1897 B, 499 ("elasmobranchs").
Rohon, J. V. 1902 A, 25 ("selachier").
Romer, A. S. 1928 A, 432 ("fish").
Rosén, N. 1916 A, 7 ("selachier").
Roth, W. 1911 A ("selachier").
Ryder, J. 1885 E, 91 ("elasmobranchs").
1886 A, 71 ("elasmobranchs").
1887 A, 345.
Sabatier, A. 1903 B, 1216 ("chondroptérygiens").
1904 A, 251 ("chondroptérygiens").
Salbey, R. 1868 A, 734 ("placoiden").
Schauinsland, H. 1906 A ("elasmobranchier").
Schlosser, M. 1917 A, 132, 133, 137, 139 ("elasmobranchier").
Schmalhausen, J. J. 1912 A, 510, 550 ("selachier").
1913 C.
1916 C, 211.
1923 A, 537 ("selachier").
Schöne, G. 1902 A, 1 ("selachier").
Schuchert, C. 1915 A, 682.
Schuchert and Barrell 1914 A, 25 ("fishes").
Sedgwick, A. 1894 A, 43.
Seeley, H. G. 1872 B, 26 ("fish").
Sewertzoff, A. N. 1896 A, 206 ("selachier").
1918 A, 206.
1923 A, 389 ("elasmobranchier").
1923 B ("elasmobranchs").
1926 A, 531.
1926 D, 76 ("elasmobranchier").

Sewertzoff and Disler 1924 A, 345 ("elasmobranchier").
Shann, E. W. 1919 A, 532.
Simpson, G. G. 1926 J, 173 ("elasmobranchs").
Sollas and Sollas 1903 A, 288 ("elasmobranchs").
Sonies, F. 1907 A, 404 ("selachier").
Spencer, W. B. 1886 A, 231 ("elasmobranchs").
Springer, F. 1924 A, 234 ("selachian fishes").
Stannius, H. 1854 A.
Steinmann, G. 1907 A, 399.
1908 A, 303 ("fische").
Stensiö, E. A. 1925 A, 64.
1925 B, 160, 179.
Strecker, C. 1887 A, 301 ("fische").
Stromer, E. 1905 C, 181 ("elasmobranchier").
1905 F, 477.
1912 A, 17, 47.
1920 A, 12.
1925 A, 16 ("elasmobranchier").
Suschkin, P. 1910 A, 247 ("elasmobranchier").
Swinnerton, H. H. 1911 A, 447 ("fishes").
Terra, P. 1911 A, 135, 198.
Tomes, C. S. 1875 C, 362.
1876 A, 257.
1898 B, 443 ("plagiostomes").
1900 A, 35 ("plagiostomes").
Traquair, R. H. 1899 C, 602 ("elasmobranchs").
1900 C, 505.
Van Wijhe, J. W. 1905 B, 319 ("selachier").
Veit, O. 1924 A, 383 ("elasmobranchier").
Versluys, J. 1922 B, 95 (Selachii).
Virchow, H. 1895 A, 105 ("selachier").
Watson, D. M. S. 1925 A, 815, 822, 825 ("elasmobranchs").
Weber, E. H. 1821 A, 1060 (Chondropterygii).
Weidenreich, F. 1922 A, 45 ("elasmobranchier").
Whitehouse, R. H. 1910 C, 135 ("elasmobranchs").
1914 A, 522 ("fishes").
1918 A, 136 ("elasmobranchs").
Wiedersheim, R. 1892 A, 43 ("fische").
Wilbrand, J. B. 1824 A, 982 ("fische").
Wilder, B. G. 1865 A, 56.
Wintrebert, P. 1910 B, 78 ("sélaciens").
Woodward, A. S. 1898 E, 329 ("fishes").
1910 B, 464 ("fishes").
1915 B, lxiv.
1917 D, lxv ("fishes").
1921 B, 29 ("sharks, rays, chimæras").
1922 C, 62.
1924 B, 338.
Woodward, H. 1878 A, 22 (Plagiostomi).
1904 B, 140.
Wright, E. P. 1878 A, 286 ("fishes").
1878 B, 149 ("fishes").
Wright, W. 1909 A, 670.
Wyman, J. 1867 B, 264 ("fishes").
Ziegler, H. E. 1901 A, 231 ("selachier").
1908 B, 655 ("selachier").
Zittel, K. A. 1901 A, 409 ("fishes").
Zittel and Koken 1911 A, 39.
Zittel and Schlosser 1923 A, 45.
Zittel and Woodward 1902 A, 17 (Selachii).

Subclass Trematopnei Bonaparte.

Bonaparte, C. L. 1831 A, 99, 121.

Unless otherwise indicated, the authors, as quoted, apply to this subclass the name Plagiostomi. It is often difficult to determine in just what sense writers employ their terms, systematic and vernacular. Bonaparte here included Cyclostomi, but later removed them.

Hay, O. P. 1902 A, 263 (Plagiostomata).
Agassiz, A. 1877 A, 123 ("plagiostomes").
Allis, E. P. 1905 A, 495.
1914 A, 353 ("selachians").
1918 B, 263.
Anthony, R. 1912 A ("sélaciens").
Arldt, T. 1907 D, 674.
Bender, O. 1907 A, 38 ("selachier").
1910 A, 122 ("selachier").
Bolk, L. 1914 A, 118 ("plagiostomen").
Bonaparte, C. L. 1833 B, 1203.
1840 A, 44.
Braus, H. 1899 A, 501 ("selachier").
Bridge, T. W. 1904 A, 148, 751.
Brohmer, H. G. 1849 A, 830, seq.
Bronn, H. G. 1849 A, 830, seq.
Cartier, O. 1875 A, 65 ("plagiostomen").
Cope, E. D. 1871 T, 449 (Selachii).
Cunningham, J. T. 1912 A, 246.
Davidoff, M. 1879 A ("plagiostomen").
Day, E. C. H. 1865 A, 565.
Dames, W. 1898 C, 331 ("sharks").
Dean, B. 1903 A, 285 (Selacha).
Derjugin, K. 1910 A, 587 (Selachii).
Dohrn, A. 1884 A, 139 ("plagiostomen").
Dollo, L. 1904 C, 47 ("elasmobranchs").
Dormitzer, M. 1852 A, 61 ("plagiostomen").
Duméril, A. 1856 A, 120 ("plagiostomen").
Fahrenholz, C. 1915 A, 390 ("plagiostomen").
Fitzinger, L. J. 1873 A, 54 (Plagiostomata).
Huxley, T. H. 1876 E, 121.
1883 B, 571.
Fuchs, H. 1907 C, 27 ("plagiostomen").
Fürbringer, K. 1904 B, 458, 479 ("selachier").
Garman, S. 1904 A, 246 ("plagiostomes").
1913 A, 9, 10 (Plagiostomia).
Gaupp, E. 1906 A, 27 ("selachier").
1910 C.
1911 A, 419 ("selachier").
Gegenbaur, C. 1866 A, 123 ("selachier").
1867 B, 380 ("selachier").
1870 C, 399 ("selachier").
1879 A, 522 ("selachier").
Gill, T. 1905 A, 657.
Goette, A. 1878 A, 12 ("plagiostomen").
Goodrich, E. S. 1910 A, 24 ("selachians").
Goodsir, J. 1857 B ("plagiostomes").
Greene, J. R. 1861 A, 227.
Haeckel, E. 1875 A, 516.
1893 A, xviii.
Hamburger, R. 1904 A, 73 ("selachier").
Hilzheimer, M. 1913 A, 471.
Hoernes, R. 1886 A, 540.
Huxley, T. H. 1859 D, 418 ("plagiostomes").
1876 E, 121.
1883 B, 571.
Jaekel, O. 1903 D, 59 ("selachier").

Jaekel, O. 1912 A, 621 ("selachier").
Jordan, D. S. 1905 A, i, 508; ii, 591 (Selachii).
1907 B, 182, 758 (Selachii).
1923 A, 90 (Selachii).
Killian, G. 1891 A, 85 ("selachier").
Kingsley, J. S. 1885 A, 72.
Klaatsch, H. 1890 A, 119 ("plagiostomen").
Lönnberg, E. 1901 A.
1902 A.
Lubosch, W. E. 1908 A, 200 ("selachier").
Meek, A. 1907 A, 411 (Selachii).
Miall, L. C. 1872 A, 41.
Müller, J. 1845 A, 137.
Nunn, E. 1882 A, 160 ("plagiostomes").
Nusbaum, J. 1907 A, 309 ("selachier").
Owen, R. 1868 A, 901.
Parker, T. J. 1886 A, 635.
Parker, W. K. 1879 C, 331 ("selachians").
Pompeckj, J. F. 1913 A, 1123.
Rabl, C. 1892 A, 10 ("selachier").
Radcliffe, L. 1911 A, 243 (Plagiostomia).
Rafinesque, C. S. 1815 A, 93 (Plagiostomia).
Rauther, M. 1913 A, 1055, 1093.
Regan, C. T. 1906 A, 722, 726 (Trematopnea).
1912 A, 836 (Trematopnea).
Reis, O. M. 1893 A, 501.
1894 A, 62 ("plagiostomen").
Roth, W. 1911 A, 518 ("plagiostomen").
Sabatier, A. 1904 A, 249 ("sélaciens").
Schmalhausen, J. J. 1913 A, 60 (Plagiostomata).
Shann, E. W. 1919 A, 532.
Solger, B. 1880 B, 458, pl. xxxix ("selachier").
Spengel, J. W. 1905 A, 332 ("elasmobranchier").
Steinhard, O. 1903 A, 1 ("plagiostomen").
Stromer, E. 1912 A, 18, 47.
Versluys, J. 1922 B, 95 (Selachii).
Wallace, A. R. 1876 A, ii, 460 (Plagiostomata).
Wiedersheim, R. 1892 A, 45 ("selachier").
Ziegler, H. E. 1908 A, 721 (selachier").

Superorder TAPINOSELACHII nom. nov.

To include Pleuropterygia, Ichthyotomi and Acanthodei.

Order PLEUROPTERYGIA Dean.

Unless otherwise indicated, the authors, as quoted, use the form Pleuropterygii.
Hay, O. P. 1902 A, 272 (Pleuropterygia).
Abel, O. 1919 A, 110 (Pleuropterygia).
1920 A, 328 ("pleuropterygier").
Arldt, T. 1923 A, 483 ("pleuropterygier").
Backman, G. 1915 A, 24.
Bridge, T. W. 1904 A, 436.
Dean, B. 1900 A, 22.
1902 C, 702.
1906 B, 155 ("pleuropterygians").
1907 B, 220.
1909 C, 241.
Eastman, C. R. 1900 G, 287.
1907 B, 23, 54 (Pleuropterygia).
1908 A, 69, 97.
Gill, T. 1905 A, 657.
Goodrich, E. S. 1908 A, 753.
Gregory, W. K. 1907 D, 445 (Pleuropterygia).
Hussakof and Bryant 1919 A, 127.
Jordan, D. S. 1905 A, i, 514; ii, 586.
1907 B, 758.
1923 A, 91.
Kiaer, J. 1924 A, 100, 104 (Cladoselachii).
Osburn, R. C. 1907 A, 420, 425 (Pleuropterygidæ).
1907 B, 173 (Pleuropterygidæ).
Parker and Haswell 1897 A, 154 (Cladoselachea).
Pompeckj, J. F. 1913 A, 1122 (Cladoselachii).
Regan, C. T. 1906 A, 722, 731.
1912 A, 836 (Pleuropterygia).
Reynolds, S. H. 1897 A, 31, 63.
Sewertzoff, A. N. 1926 B, 577, 579.
Stromer, E. 1920 A, 12, 15 (Cladoselachii).
Woodward, A. S. 1921 B, 29.
1922 C, 64.
Zittel and Woodward 1902 A, 19.

CLADOSELACHIDÆ Dean.

Hay, O. P. 1902 A, 272.
Arldt, T. 1923 A, 483 ("cladoselachier").
Backman, G. 1913 A, 54.
Braus, H. 1906 A, 199 ("cladoselachiden").
Bridge, T. W. 1904 A, 438.
Dean, B. 1895 B, 424 ("cladoselachids").
1902 A, 768, 770 ("cladoselachids").
1907 B, 220 ("cladoselachians," Cladoselachia).
1909 C, 212, 241 (Cladoselachia, Cladoselachidæ).
1912 A, 227.
Eastman, C. R. 1907 B, 23.
Goodrich, E. S. 1909 A, 187.
Gregory, W. K. 1907 D, 445 (Cladoselachii, Cladoselachidæ).
1915 D, 343 (Cladoselachii).
Hay, O. P. 1901 B, 61, 69.
Jordan, D. S. 1923 A, 91.
Osburn, R. G. 1907 B, 173.
Regan, C. T. 1906 A, 722.
Stromer, E. 1912 A, 23 (Cladoselachii).
Versluys, J. 1922 B, 102 (Cladoselachii).
Woodward, A. S. 1920 B, 5.

CLADOSELACHE Dean. Type *Cladodus fyleri* (Newb.).

Hay, O. P. 1902 A, 272.
Abel, O. 1912 F, 518.
1920 A, 329.
Backman, G. 1913 A, 48.
Bridge, T. W. 1904 A, 438, 736.
Cunningham, J. T. 1897 A, 496.
1912 A, 252.
Dames, W. 1898 C, 331.

Daniel, J. F. 1922 A, 2, fig. 1.
Dean, B. 1902 A, 768.
1902 C, 702.
1909 C, 244, fig. 41.
Derjugin, K. 1910 B, 209.
Eastman, C. R. 1900 G, 287.
1901 C, 329.
1905 A, 48.
1907[3] B, 54.
1908 A, 99.
1911 B, 184.
Goodrich, E. S. 1904 A, 492
1908 A, 754.
1909 A, 184.
Hay, O. P. 1901 B, 66, 69.
Hussakof, L. 1910 B, 306.
Jaekel, O. 1909 D, 711, fig. 3.
Jordan, D. S. 1910 C, 186.
1923 A, 91.
Karpinsky, A. P. 1915 A, 129.
1925 A, 128.
Kemna, A. 1904 A, 20.
Kerr, J. G. 1900 A, 230.
Kiaer, J. 1924 A, 101, fig. 46.
Kingsley, J. S. 1925 A, 232, fig. 244.
Knipe, H. R. 1912 A, 40, fig.
Lull, R. S. 1918 B, 203.
Moodie, R. L. 1926 A, 69.
Osborn, H. F. 1916 E, 604, fig. 13.
Osburn, R. C. 1907 A, 425.
1907 B, 172.
Oswald, F. 1911 A, 407, fig. 5.
Pompeckj, J. F. 1913 A, 1122, 1124.
Regan, C. T. 1906 A, 731 (Cladoselachus).
Rennie, J. 1906 A, 431.
Reynolds, S. H. 1897 A, 31, 63, 129.
Semon, R. 1898 A, 105.
Stromer, E. 1905 G, 478.
Swinnerton, H. H. 1905 A, 373.
1911 A, 453, fig. 12.
Traquair, R. H. 1898 B, 44.
1900 C, 505.
Watson, D. M. S. 1925 A, 820, 824.
Woodward, A. S. 1897 C, 379.
1898 E, 329.
1906 C, 273.
1915 B, lxv.
1921 A, 179.
1921 B, 29, fig. 1.
1922 C, 64.
Zittel and Schlosser 1923 A, 54.
Zittel and Woodward 1902 A, 19.

Cladoselache acanthopterygius Dean.

Dean, B. 1909 C, 228, 237, 240, fig. 27.
Hussakof and Bryant 1919 A, 128, pl. xlv, text-fig. 43.
Upper Devonian (Cleveland); Ohio.

Cladoselache brachypterygius Dean.

Dean, B. 1909 C, 226, 240, pl. xxxii, text-figs. 22, 23, 26.
Hussakof and Bryant 1919 A, 129, pl. xlvi.
Upper Devonian (Cleveland); Ohio.

Cladoselache clarki (Claypole).

Hay, O. P. 1902 A, 272.
Claypole, E. W. 1903 A, 319, 351 (Cladodus).
Dean, B. 1909 C, 215, 220, 239, figs. 3, 13, 18a, 21.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Upper Devonian (Cleveland); Ohio.

Cladoselache desmopterygius Dean.

Dean, B. 1909 C, 227, 240, pl. xxix, text-fig. 24.
Hussakof and Bryant 1919 A, 130, pl. xlvii; text-figs. 44, 45.
Upper Devonian (Cleveland?); Ohio?

Cladoselache eastmani Dean.

Dean, B. 1909 C, 228, 240, fig. 25.
Hussakof and Bryant 1919 A, 19, 133, text-fig. 46.
Upper Devonian (Naples shale, Rhinestreet shale); New York.

Cladoselache fyleri (Newb.).

Hay, O. P. 1902 A, 272.
Abel, O. 1907 D, (162).
1919 A, 113, figs. 72, 74 (Cladodus).
1920 A, 329, fig. 520.
1921 A, 248, fig. 90 (Cladodus).
Backman, G. 1913 A, 50.
Böker, H. 1927 A, 36 (Cladodus).
Braus, H. 1901 A, 184, figs. 4, 6 (Cladodus).
Bridge, T. W. 1904 A, 437, fig. 249.
Claypole, E. W. 1903 A, 319, 346, 351 (Cladodus).
Dean, B. 1902 D, 273, pl. viii, pl. ix, fig. 3.
1909 C, 215, 239, pl. xxvi, text-figs. 1, 2, 5, 6, 9-11, 14-16, 19, 19a, 29-31, 34-36.
Eastman, C. R. 1907 B, 18, fig. 14.
1908 A, 61, 283, fig. 6.
1911 A, 16, fig. 3.
Frassetto, F. 1915 A, 5, figs. 1, 23, 24.
Goodrich, E. S. 1909 A, 185, figs. 152, 153.
Gregory, W. K. 1922 A, 5, fig. 2.
Hussakof, L. 1908 A, 26.
Hussakof and Bryant 1919 A, 134, pl. xlviii.
Hyde, J. E. 1926 A, 498.
Jaekel, O. 1909 D, 714, figs. 5, 6.
Jordan, D. S. 1905 A, i, 514, figs. 300-302.
Pompeckj, J. F. 1913 A, 1122.
Stensiö, E. A. 1925 A, 125.
Stromer, E. 1912 A, 22, fig. 30.
Woodward, A. S. 1890 F, 147 (Cladodus).
1906 C, 272, fig. 5.
1921 B, 31.
1924 A, 108, fig. 2.
Zittel and Koken 1911 A, 44, figs. 60, 61.
Upper Devonian (Cleveland); Ohio.

Cladoselache kepleri (Newb.).

Hay, O. P. 1902 A, 272.
Claypole, E. W. 1903 A, 319, 346, 350 (Cladodus).
Dean, B. 1902 D, 274.
1909 C, 215, 239, pl. xxviii, figs. 4, 8, 18, 20.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Hussakof, L. 1908 A, 27.
Hussakof and Bryant 1919 A, 135, pls. xlix, l; text-figs. 47, 48.
Hyde, J. E. 1926 A, 498.
Upper Devonian (Cleveland); Ohio.

Cladoselache magnificus (Claypole).

Hay, O. P. 1902 A, 269 (Cladodus).
Dean, B. 1909 C, 213, 241.
Savage, T. E. 1902 A, 262 (Cladodus).
Mississippian; Alabama, Illinois, Indiana, Iowa?

Cladoselache newberryi Dean.

Hay, O. P. 1902 A, 272.
Dean, B. 1909 C, 234, 240, pl. xxx, figs. 33, 38.
Hussakof, L. 1908 A, 27.
Hussakof and Bryant 1919 A, 128, 138, text-fig. 49.
Zittel and Woodward 1902 A, 19, fig. 34.
Mississippian (Waverly); Ohio.

Cladoselache pachypterygius Dean.

Dean, B. 1909 C, 222, 241, fig. 17.
Mississippian (Waverly); Kentucky.

Cladoselache rivi-petrosi (Claypole).

Hay, O. P. 1902 A, 269 (Cladodus).
Claypole, E. W. 1903 A, 319, 351 (Cladodus).
Dean, B. 1902 C, 702 ("Cladoselacha").
Eastman, C. R. 1907 B, 18 (Cladodus).
1908 A, 283 (Cladodus).
Upper Devonian (Cleveland); Ohio.

Cladoselache sinuatus (Claypole).

Hay, O. P. 1902 A, 272.
Claypole, E. W. 1903 A, 319, 351 (Cladodus).
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Upper Devonian (Cleveland); Ohio.

Cladoselache sp. indet.

Eastman, C. R. 1907 B, 17, 58, pl. viii. Upper Devonian (Chemung Portage); New York.
1908 A, 281. Upper Devonian (Chemung Portage); New York.
Hussakof, L. 1908 A, 27. Upper Devonian, (Cleveland); Ohio.
Hyde, J. E. 1926 A, 502, fig. Devonian (Cleveland); Ohio.

CLADODONTIDÆ Nicholson and Lydekker.

Hay, O. P. 1902 A, 267.
Abel, O. 1919 A, 115.
Arldt, T. 1923 A, 483 ("cladodonten").
Braus, H. 1901 A, 179 ("cladodonten").
Cope, E. D. 1891 N, 15.
Dean, B. 1909 C, 242.
Dollo, L. 1889 F, 338.
1903 D, 701 ("cladodontes").
1906 B, 136 ("cladodontes").
Eastman, C. R. 1907 B, 23, 61.
1908 A, 107.
1917 A, 254.
Gill, T. 1885 A, lxiv.
Goodrich, E. S. 1909 A, 183.
Hay, O. P. 1901 B, 66, 69.
Jordan, D. S. 1905 A, i, 520; ii, 563.
1923 A, 92.
Koken, E. 1893 B, 253.
1904 A, 305 ("cladodontiden").
Regan, C. T. 1906 A, 722.
Rosén, N. 1916 A, 10.
Schlosser, M. 1917 A, 133 ("cladodontiden").
Stensiö, E. A. 1925 A, 125, 126 ("cladodontids, cladodonthids").
Zittel and Koken 1911 A, 44.
Zittel and Schlosser 1923 A, 52.

CLADODUS Agassiz. Type *C. mirabilis* Agassiz.

Hay, O. P. 1902 A, 267 (Cladodus); 272 (Styptobasis).
Abel, O. 1919 A, 114, figs. 73, 75.
1920 A, 329 (Syn. of Cladoselache).
Agassiz, L. 1844 C, 267.
Anonymous 1898 C, 74.
Backman, G. 1913 A, 51.
Barkas, W. J. 1874 B, 164, figs. 3-6.
1874 D, 545.
Böker, H. 1927 A, 36.
Braus, H. 1901 A, 183, fig. 2.
1904 A, 412.
Bronn, H. G. 1849 A, 650.
Clark, W. 1898 A, 46.
Claypole, E. W. 1903 A, 344, 347.
Cushing, H. P. 1912 A, 582.
Dames, W. 1898 C, 331.
Dean, B. 1902 A, 769.
1909 C, 249.
Dollo, L. 1889 F, 337.
Eastman, C. R. 1907 B, 61, 193.
1908 A, 107.
1917 A, 254.
Frassetto, F. 1915 A, 46.
Giebel, C. G. 1855 A, 114.
Goodrich, E. S. 1909 A, 50, 128, 184, figs. 68, 87.
Hay, O. P. 1901 B, 66, 69 (Cladodus, Styptobasis).
Hayden, F. V. 1872 A, 132.
Howes, G. B. 1894 A, 84.
Jaekel, O. 1892 B, 156.
1909 D, 711, figs. 4, 7.
1911 A, 60, fig. 60.
1913 A, 91.
1921 A, 228, fig. 8.
Jordan, D. S. 1919 B, 213.
1923 A, 92.
Karpinsky, A. 1915 A, 129.
Klaatsch, H. 1890 A, 122.
Moodie, R. L. 1926 A, 66.
Regan, C. T. 1906 A, 731.
Reis, O. M. 1894 A, 50.
Ridewood, W. G. 1896 A, 382, fig. 6
Rogers, A. F. 1924 A, 548.
Savage, T. E. 1902 A, 257.
Swinnerton, H. W. 1905 A, 373.
Teller, E. E. 1906 A, 164.
Thompson, J. 1872 A, 66.
Traquair, R. H. 1898 B, 41, pl. iv.
1900 C, 505.
1905 A, 83.
Twenhofel and Dunbar 1914 A, 160.

Weller, S. 1902 A, 427.
Woodward, A. S. 1924 A, 112.
Zittel and Koken 1911 A, 45.
Zittel and Schlosser 1923 A, 52, 54, fig. 70.
Zittel and Woodward 1902 A, 19.

Cladodus aculeatus (Cope).

Hay, O. P. 1902 A, 272 (Styptobasis).
Pennsylvanian; Illinois.

Cladodus acuminatus Newb.

Hay, O. P. 1902 A, 267.
Pennsylvanian; Ohio.

Cladodus alternatus St. John and Worth.

Hay, O. P. 1902 A, 268.
Eastman, C. R. 1908 A, 111.
Hennig, E. 1920 A, 17.
Mississippian (Kinderhook, Burlington); Iowa.

Cladodus angulatus Newb. and Worth.

Hay, O. P. 1902 A, 268.
Mississippian (Keokuk); Illinois.

Cladodus bellifer St. John and Worth.

Hay, O. P. 1902 A, 268.
Brongniart, C. 1888 C, 45, 47.
Mississippian (Burlington); Iowa.

Cladodus carinatus St. John and Worth.

Hay, O. P. 1902 A, 268.
Claypole, E. W. 1903 A, 319, 346.
Pennsylvanian; Illinois, Iowa.

Cladodus claypolei Hay.

Hay, O. P. 1902 A, 268.
Eastman, C. R. 1907 B, 18.
1908 A, 282.
Upper Devonian (Cleveland); Ohio.

Cladodus compressus Branson.

Branson, E. B. 1908 A, 312.
Branson, E. B. 1906 A, 1378, pl. xlii, figs. 1-4 (C. striatus, not of Agassiz).
Eastman, C. R. 1917 A, 256.
Hussakof, L. 1908 A, 24.
Mississippian (Salem); Indiana.

Cladodus concinnus Newb.

Hay, O. P. 1902 A, 268.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
1915 A, 283.
Hussakof, L. 1908 A, 25.
Upper Devonian (Cleveland, Huron shale); Ohio.

Cladodus coniger Hay.

Hay, O. P. 1902 A, 268.
Eastman, C. R. 1907 B, 20, 63.
1908 A, 109, 287.
Hennig, E. 1920 A, 17.
Hussakof and Bryant 1919 A, 139.
Upper Devonian (Chemung); Pennsylvania.

Cladodus costatus Newb. and Worth.

Hay, O. P. 1902 A, 268.
Mississippian (Chester); Illinois.

Cladodus deflexus Newb. and Worth.

Hay, O. P. 1902 A, 268.
Mississippian (Burlington); Illinois.

Cladodus eboreus nom. nov.

Eastman, C. R. 1917 A, 255, pl. x, fig. 4; pl. xviii, fig. 1 (C. aculeatus, preoccupied).
Mississippian? (Caney); Oklahoma.

Cladodus eccentricus St. John and Worth.

Hay, O. P. 1902 A, 268.
Mississippian (St. Louis); Illinois, Missouri.

Cladodus elegans Newb. and Worth.

Hay, O. P. 1902 A, 268.
Mississippian (St. Louis); Missouri.

Cladodus euglypheus St. John and Worth.

Hay, O. P. 1902 A, 268.
Branson, E. B. 1906 A, 1378 (C. euglyphæus).
1908 A, 312.
Mississippian (St. Louis); Illinois, Missouri, Iowa.

Cladodus exiguus St. John and Worth.

Hay, O. P. 1902 A, 268.
Eastman, C. R. 1908 A, 111.
Hennig, E. 1920 A, 17.
Mississippian (Kinderhook); Iowa.

Cladodus exilis St. John and Worth.

Hay, O. P. 1902 A, 268.
Eastman, C. R. 1908 A, 111.
Hennig, E. 1920 A, 17.
Mississippian (Kinderhook); Iowa.

Cladodus ferox Newb. and Worth.

Hay, O. P. 1902 A, 268.
Branson, E. B. 1906 A, 1376, pl. xli, figs. 3, 4.
Mississippian (St. Louis); Missouri; (Salem); Indiana.

Cladodus formosus Hay.

Hay, O. P. 1902 D, 373, figure 1.
Cross, W. 1905 C, 5.
Eastman, C. R. 1908 A, 110, 286.
1915 A, 283.
Hennig, E. 1920 A, 17.
Merrill, G. P. 1907 A, 7.
Upper Devonian (Ouray); Colorado.

Cladodus fulleri St. John and Worth.

Hay, O. P. 1902 A, 268.
Pennsylvanian; Illinois, Iowa.

Cladodus girtyi Hay.

Hay, O. P. 1902 A, 268.
Cockerell, T. D. A. 1908 C, 161.
Eastman, C. R. 1903 B, 169.
Merrill, G. P. 1907 A, 7.
Pennsylvanian; Colorado.

Cladodus gomphoides St. John and Worth.
Hay, O. P. 1902 A, 268.
Mississippian (Burlington); Iowa.

Cladodus gracilis Newb. and Worth.
Hay, O. P. 1902 A, 268.
Eastman, C. R. 1917 A, 255.
Pennsylvanian; Indiana.

Cladodus grandis Newb. and Worth.
Hay, O. P. 1902 A, 268.
Mississippian (Chester); Illinois.

Cladodus hertzeri Newb.
Hay, O. P. 1902 A, 268.
Hussakof, L. 1908 A, 25.
Mississippian (Waverly); Ohio.

Cladodus horridus Newb.
Newberry, J. S. 1874 G, 98 (No description).
Mississippian (Waverly); Kentucky or Ohio.

Cladodus indianensis Branson.
Branson, E. B. 1906 A, 1377, pl. xlii, figs. 5-8.
Mississippian (Salem); Indiana.

Cladodus intercostatus St. John and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (Burlington, Keokuk); Iowa, Illinois.

Cladodus irregularis Strong.
Strong, E. A. 1872 A, 2.
Mississippian; Michigan.

Cladodus ischypus Newb. and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (St. Louis); Missouri.

Cladodus keokuk St. John and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (Keokuk); Iowa, Illinois.

Cladodus knightianus (Cope).
Hay, O. P. 1902 A, 272 (Styptobasis).
Eastman, C. R. 1903 B, 168, pl. ii, fig. 4.
Knight, W. C. 1899 A, 365 (Styptobasis).
Permian (Chase); Nebraska.

Cladodus lamnoides Newb. and Worth.
Hay, O. P. 1902 A, 269.
Branson, E. B. 1906 A, 1378, pl. xlii, figs. 9, 10.
Mississippian (Keokuk); Illinois: (Salem); Indiana.

Cladodus micropus Newb. and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (Keokuk); Illinois.

Cladodus monroei Eastman.
Hay, O. P. 1902 A, 269.
Cleland, H. F. 1911 A, 147, pl. xlvii, fig. 3.
Eastman, C. R. 1907 B, 15, 62, pl. i, fig. 5.
1908 A, 108, 276, pl. i, fig. 17.
Hennig, E. 1920 A, 17.
Teller, E. E. 1911 A, 270.
Middle Devonian (Hamilton); Wisconsin.

Cladodus mortifer Newb. and Worth.
Hay, O. P. 1902 A, 269.
Branson, E. B. 1916 A, 652 (Syn. of *C. occidentalis*).
Hayden, F. V. 1872 A, 127.
Hussakof, L. 1908 A, 25.
Mason, S. C. 1883 A, 13.
Meek, F. B. 1869 A, 3.
1872 A, 101, 127.
Pennsylvanian; Illinois, Kansas.

Cladodus newmani Tuomey.
Hay, O. P. 1902 A, 269.
Mississippian; Alabama.

Cladodus occidentalis Leidy.
Hay, O. P. 1902 A, 269.
Branson, E. B. 1916 A, 652, pl. ii, figs. 23, 24.
Eastman, C. R. 1903 B, 168, 169, pl. ii, figs. 3, 8, 9.
Pennsylvanian (Missourian); Kansas, Illinois, Indiana, Iowa, Nebraska, Wyoming.

Cladodus pandatus St. John and Worth.
Hay, O. P. 1902 A, 269.
Pennsylvanian; Illinois.

Cladodus parvulus Newb.
Hay, O. P. 1902 A, 269.
Claypole, E. W. 1903 A, 319, 321.
Hussakof, L. 1908 A, 25.
Devonian (Cleveland); Ohio.

Cladodus pattersoni Newb.
Hay, O. P. 1902 A, 269.
Claypole, E. W. 1903 A, 319, 321.
Miller, A. M. 1916 A, 72 ("Orodus").
Newberry, J. S. 1874 G, 94, 98.
Devonian (Waverly); Ohio, Kentucky.

Cladodus politus Newb. and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (Chester); Illinois.

Cladodus prænuntius St. John and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (Burlington); Iowa.

Cladodus prototypus Eastman.
Eastman, C. R. 1907 B, 13, 61, pl. i, fig. 15.
Eastman, C. R. 1908 A, 108, 276, pl. i, fig. 18.
Hennig, E. 1920 A, 17.
Hussakof, L. 1908 A, 25.
Stauffer, C. R. 1909 A, 169.
Middle Devonian (Columbus); Ohio.

Cladodus raricostatus St. John and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (Keokuk); Iowa.

Cladodus robustus Newb. and Worth.
Hay, O. P. 1902 A, 269.
Mississippian (Keokuk); Illinois.

Cladodus romingeri Newb.
Hay, O. P. 1902 A, 269.
Hussakof, L. 1908 A, 25.
Mississippian (Waverly); Michigan.

Cladodus spinosus Newb. and Worth.
Hay, O. P. 1902 A, 269.
Branson, E. B. 1906 A, 1377, pl. xli, figs. 1, 2.
Eastman, C. R. 1917 A, 254, pl. viii, fig. 7.
Mississippian (St. Louis); Missouri; (Salem); Indiana.

Cladodus splendens Newb.
Hay, O. P. 1902 A, 269.
Weller, S. 1926 A, 495, fig.
Mississippian (Kinderhook); Iowa.

Cladodus springeri St. John and Worth.
Hay, O. P. 1902 A, 269.
Brongniart, C. 1888 C, 45, 47.
Eastman, C. R. 1908 A, 111.
Hennig, E. 1920 A, 17.
Mississippian (Kinderhook); Iowa.

Cladodus stenopus Newb. and Worth.
Hay, O. P. 1902 A, 270.
Branson, E. B. 1906 A, 1377.
Mississippian (St. Louis); Illinois.

Cladodus striatus Agassiz.
Hay, O. P. 1902 A, 270.
Branson, E. B. 1908 A, 311.
Eastman, C. R. 1899 A, 642.
Subcarboniferous; England, Ireland. Devonian (Corniferous); Ohio.

Cladodus subulatus Newb.
Hay, O. P. 1902 A, 270.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Upper Devonian (Cleveland); Ohio.

Cladodus succinctus St. John and Worth.
Hay, O. P. 1902 A, 270.
Eastman, C. R. 1908 A, 111.
Hennig, E. 1920 A, 17 (C. succinatus).
Mississippian (Kinderhook); Iowa.

Cladodus terrelli Newb.
Hay, O. P. 1902 A, 270.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Hussakof, L. 1908 A, 26.
Upper Devonian (Cleveland); Ohio.

Cladodus tumidus Newb.
Hay, O. P. 1902 A, 270.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Hussakof, L. 1908 A, 26.
Upper Devonian (Cleveland); Ohio.

Cladodus turritus Newb. and Worth.
Hay, O. P. 1902 A, 270.
Mississippian (Keokuk); Illinois.

Cladodus urbs-ludovici Eastman.
Eastman, C. R. 1908 A, 110, 281, pl. iii, fig. 3.
Hennig, E. 1920 A, 17.
Hussakof and Bryant 1919 A, 15, 17, 139, pl. xliv, fig. 1.
Upper Devonian (Genesee); Kentucky.

Cladodus vanhornei St. John and Worth.
Hay, O. P. 1902 A, 270.
Mississippian (St. Louis); Illinois.

Cladodus wachsmuthi St. John and Worth.
Hay, O. P. 1902 A, 270.
Eastman, C. R. 1908 A, 111.
Mississippian (Kinderhook); Iowa.

Cladodus zygopus Newb. and Worth.
Hay, O. P. 1902 A, 270.
Mississippian (Chester); Illinois.

Cladodus sp. indet.
Undetermined species of *Cladodus* have been reported as follows:
Branson, E. B. 1906 A, 1379, pl. xlii, fig. 11.
Mississippian (Salem); Indiana.
Clarke, J. M. 1885 A, 72. Upper Devonian (Chemung); New York.
Clarke and Luther 1904 A, 64. Devonian (Chemung); New York.
Eastman, C. R. 1907 B, 20, 63. Upper Devonian (Chemung); New York.
1908 A, 287. Upper Devonian (Chemung); New York.
Twenhofel and Dunbar 1914 A, 160. Pennsylvanian; Kansas.
Van Tuyl, F. M. 1925 A, 140. Mississippian (Burlington); Iowa.

PHŒBODUS St. John and Worth. Type *P. sophiæ* St. John and Worth.
Hay, O. P. 1902 A, 270.
Eastman, C. R. 1901 A, 795.
1903 B, 195.
1907 B, 60.
1908 A, 105.
Hay, O. P. 1901 B, 66.
Hussakof and Bryant 1919 A, 148.
Jordan, D. S. 1923 A, 92.

Phœbodus dens-neptuni Eastman.
Eastman, C. R. 1903 B, 196; pl. iv, fig. 39.
Mississippian (Keokuk); Iowa.

Phœbodus duplicatus (Newb. and Worth.).
Hay, O. P. 1902 A, 267 (Thrinacodus).
Eastman, C. R. 1903 B, 195.
Keyes, C. R. 1897 A, 332.
Mississippian (Keokuk); Iowa.

Phœbodus incurvus (Newb. and Worth.).
Hay, O. P. 1902 A, 195 (Thrinacodus).
Eastman, C. R. 1903 B, 195.
Mississippian (Keokuk); Illinois. Iowa.

Phœbodus knightianus Eastman.
Eastman, C. R. 1913 B, 169; pl. iv, fig. 40.
Permo-Carboniferous (Chase); Nebraska.

Phœbodus macisaacsii (St. John and Worth.).
Hay, O. P. 1902 A, 270.
Eastman, C. R. 1908 A, 106.
Middle Devonian (Cedar Valley); Iowa.

Phœbodus politus Newb.
Hay, O. P. 1902 A, 270.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 18, 50, 233; pl. i, fig. 12.
1908 A, 106, 282; pl. i, fig. 9.
Hussakof, L. 1908 A, 28.
Upper Devonian (Cleveland); Ohio.

Phœbodus sophiæ St. John and Worth.
Hay, O. P. 1902 A, 270.
Eastman, C. R. 1908 A, 107 (Syn.? of P. macisaacsii).
Middle Devonian (Cedar Valley); Iowa.

Phœbodus springeri (St. John and Worth.).
Hay, O. P. 1902 A, 270.
Mississippian (Kinderhook, Burlington); Iowa.

LAMBDODUS St. John and Worth. Type *L. costatus* St. John and Worth.

Hay, O. P. 1902 A, 270.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 92.
Traquair, R. H. 1905 A, 83.

Lambdodus calceolus St. John and Worth.
Hay, O. P. 1902 A, 270.
Mississippian (Burlington); Iowa, Illinois: (Keokuk); Illinois, Iowa, Missouri.

Lambdodus costatus St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (Burlington); Iowa, Illinois: (Keokuk); Illinois, Iowa, Missouri.

Lambdodus hamulus St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (Chester); Illinois.

Lambdodus reflexus St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (Chester); Illinois.

Lambdodus transversus St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (St. Louis); Illinois.

CARCHAROPSIS Agassiz. Type *C. prototypus* Agassiz.

Hay, O. P. 1902 A, 271.
Arldt, T. 1923 A, 484.
Barkas, W. J. 1874 D, 545.
Bronn, H. G. 1848 A, 220.
1849 A, 646.
Eastman, C. R. 1917 A, 256 (Dicrenodus).
Giebel, C. G. 1855 A, 116 (Dicrenodus).
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 214 (Syn. of Dicrenodus).
1920 C, 422 (Syn. of Dicrenodus).
1923 A, 93.
Karpinsky, A. 1902 A, 214.

Carcharopsis texanus (Eastman).
Eastman, C. R. 1917 A, 256, pl. vii, fig. 4. (Dicrenodus.)
Pennsylvanian; Texas.

Carcharopsis wortheni Newb.
Hay, O. P. 1902 A, 271.
Eastman, C. R. 1917 A, 256.
Mississippian; Alabama.

HYBOCLADODUS St. John and Worth. Type *H. plicatilis* St. J. and Worth.

Hay, O. P. 1902 A, 271.
1901 B, 66.
Jordan, D. S. 1923 A, 92.
Traquair, R. H. 1905 A, 83.

Hybocladodus compressus (Newb. and Worth.).
Hay, O. P. 1902 A, 271.
Mississippian (Burlington); Iowa.

Hybocladodus intermedius St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (Keokuk); Illinois, Iowa.

Hybocladodus nitidus St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (Chester); Illinois.

Hybocladodus plicatilis St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (Burlington); Iowa.

Hybocladodus tenuicostatus St. John and Worth.
Hay, O. P. 1902 A, 271.
Mississippian (Keokuk); Illinois, Iowa.

MONOCLADODUS Claypole. Type *M. clarki* Claypole.

Hay, O. P. 1902 A, 272.
Claypole, E. W. 1903 A, 347, 351.
Dean, B. 1909 C, 216. (Genus "abandoned.")
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 92.
Traquair, R. H. 1905 A, 83.

Monocladodus clarki Claypole.

Hay, O. P. 1902 A, 272.
Claypole, E. W. 1903 A, 319, 351.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Upper Devonian (Cleveland); Ohio.

Monocladodus pinnatus Claypole.

Hay, O. P. 1902 A, 272.
Claypole, E. W. 1903 A, 319, 352.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Upper Devonian (Cleveland); Ohio.

SYMMORIIDÆ Dean.

Dean, B. 1909 C, 242.

SYMMORIUM Cope. Type *S. reniforme* Cope.

Hay, O. P. 1902 A, 271.
Braus, H. 1901 A, 189.
Dean, B. 1902 A, 769, 772.
1909 C, 253.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 92.
Regan, C. T. 1906 A, 731.

Symmorium reniforme Cope.

Hay, O. P. 1902 A, 271.
Backman, G. 1913 A, 50, 52.
Braus, H. 1904 A, 412.
1901 A, 182, fig. 3.
Goodrich, E. S. 1909 A, 128, fig. 87.
Pennsylvanian; Illinois.

Superorder ICHTHYOTOMI Cope.

Hay, O. P. 1902 A, 263 (Ichthyotomi, Pleuracanthides.)
Abel, O. 1912 F, 440.
1919 A, 116.
1920 A, 329.
Arldt, T. 1923 A, 483 ("ichthyotomen").
Backman, G. 1915 A, 24.
Braus, H. 1901 B, 218 ("pleuracanthiden").
Bridge, T. W. 1904 A, 438, 743.
Cope, E. D. 1885 EE, 613.
1891 N, 15.
1900 A, 22 (Pleuracanthia).
Dean, B. 1894 A, 110.
1900 A, 22.
1902 C, 702.
1909 C, 242.
Depéret, C. 1907 B ("ichthyotomes").
Eastman, C. R. 1902 C, 702.
1907 B, 23, 58.
1908 A, 69, 101.
Gill, T. 1905 A, 657.
Goodrich, E. S. 1904 A, 493.
1908 A, 753 (Pleuracanthodii).
1909 A, 180 (Pleuracanthodii).
Gregory, W. K. 1907 D, 445 (Ichthyotomi, Pleuracanthidæ).
Hæckel, E. 1893 A, xxiv (Proselachii).
Jordan, D. S. 1905 A, i, 516, 520; ii, 218, 576.
1907 B, 186, 219, 758.
1923 A, 91.
Kehrer, F. A. 1896 A, 348 ("proselachier").
Lütken, C. 1868 C (Pleuracanthini).
Osburn, R. C. 1907 A, 415 ("primitive sharks").
Parker and Haswell 1897 A, 155 (Pleuracantha).
Pompeckj, J. F. 1913 A, 1121.
Regan, C. T. 1906 A, 722.
1912 A, 836.
Reynolds, S. H. 1897 A, 31, 62, 116, 130.
Rosén, N. 1916 A, 10, 30.
Schlosser, M. 1917 A, 147, 148.
Sewertzoff, A. N. 1926 A, 536 (Pleurocanthodii).
1926 B, 577.
Stromer, E. 1912 A, 23.
Versluys, J. 1922 B, 102.
Woodward, A. S. 1911 C, 46 ("pleuracanths").
1921 B, 33.
1922 C, 66.
1924 A, 108.
Zittel and Koken 1911 A, 41.
Zittel and Schlosser 1923 A, 47, 49.
Zittel and Woodward 1902 A, 22.

XENACANTHIDÆ Hoernes.

Hoernes, R. 1886 A, 544 (earliest?).
Unless otherwise indicated the authors, as quoted, use for this family the name Pleuracanthidæ.
Hay, O. P. 1902 A, 263.
Abel, O. 1919 A, 118.
Arldt, T. 1907 D, 252, 283 (Xenacanthidæ).
Backman, G. 1913 A, 49 ("pleuracanthiden").
Braus, H. 1901 A, 190 ("pleuracanthiden").
1904 A, 395 ("xenacanthiden").
1906 A, 173 ("xenacanthiden").
Bridge, T. W. 1904 A, 440.
Cope, E. D. 1891 N, 15.
Dean, B. 1894 A ("xenacanthids").
1906 B, 155 ("pleuracanths").
Dollo, L. 1889 F, 338.
1903 D, 701 ("pleuracanthes").
1906 B, 136 ("pleuracanthiens").
Evans, H. M. 1923 A, 17.
Fuchs, H. 1907 C, 27 ("pleuracanthiden").
Fürbringer, M. 1902 A, 194 (Xenacanthidæ).
1904 B, 459, 489 ("pleuracanthiden").
Gaupp, E. 1905 D, 877 ("pleuracanthiden").
Gill, T. 1898 A, 697 (Xenacanthini).

Goodrich, E. S. 1909 A, 183.
Hay, O. P. 1901 B, 66, 69.
Hilzheimer, M. 1913 A, 470.
Hussakof, L. 1914 A, 267 ("pleuracanths").
Jaekel, O. 1909 D, 717 ("pleuracanthiden").
1911 A, 61 ("pleuracanthiden").
1913 A, 91 ("pleuracanthiden").
Jordan, D. S. 1905 A, i, 520; ii, 586.
1907 B, 758.
1923 A, 91 (Xenacanthidæ).
Klaatsch, H. 1890 A, 122 ("xenacanthiden").
Koken, E. 1893 B, 253 ("pleuracanthiden").
1904 A, 305 ("pleuracanthiden").
Matthes, E. 1921 A, 225 (Pleuracanthus).
Osburn, R. C. 1907 B, 173.
Pompeckj, J. F. 1913 A, 1122 (Pleuracanthi).
Rosén, N. 1916 A, 10.
Schlosser, M. 1917 A, 133 ("pleuracanthiden").
Schmalhausen, J. J. 1916 B, 147.
Stensiö, E. A. 1925 A, 126 ("pleuracanthids").
Stromer, E. 1925 A, 19.
Traquair, R. H. 1900 C, 505, 506.
Woodward, A. S. 1920 B, 5.
Zittel and Koken 1911 A, 42.
Zittel and Schlosser 1923 A, 50.
Zittel and Woodward 1902 A, 23.

XENACANTHUS Beyrich. Type *Orthacanthus decheni* Goldfuss.

Beyrich, E. 1848, Archiv Min., Geog., etc., Berlin, 24.
Unless otherwise indicated the authors, as cited, use *Pleuracanthus*, which is preoccupied.
Hay, O. P. 1902 A, 263.
Abel, O. 1907 D, (159).
1908 E, 410, fig. 4.
1919 A, 118, fig. 76.
1920 A, 329.
1921 A, 160, fig. 25.
Backman, G. 1913 A, 48.
Barkas, W. J. 1874 D, 547, 548 (Pleuracanthus, Xenacanthus).
Beyrich, E. 1848 B, 646.
Braus, H. 1904 A, 395, fig. 6 (Xenacanthus).
Bridge, T. W. 1904 A, 438, 751, fig. 250.
Broili, F. 1904 B, 483.
Bronn, H. G. 1849 A, 640.
Case, E. C. 1915 A, 124.
1926 B, 195 (Pleuracanthus).
Cope, E. D. 1891 N, 15, fig. 6.
Cunningham, J. T. 1897 A, 492, 496.
1912 A, 253.
Deecke, W. 1913 A, 72.
Dollo, L. 1889 F, 335.
1906 B, 136.
Eastman, C. R. 1908 A, 103, fig. 16.
Evans, H. M. 1923 A, 17, text-figs. 10-14.
Fürbringer, M. 1902 A, 194 (Xenacanthus).
Gill, T. 1881 A, 370.
Gaupp, E. 1905 D, 874.
Goette, A. 1901 A, 564, fig.
Goodrich, E. S. 1904 A, 493 (Xenacanthus).
1901 A, 315, figs. D, E.
1909 A, 180, figs. 146-151.
Gregory, W. K. 1904 A, 59.
1915 D, 345.
Hay, O. P. 1901 B, 66 (Pleuracanthus, Xenacanthus).
Hilzheimer, M. 1913 A, 470, fig. 5.
Huber, O. 1901 A, 605 (Xenacanthus).
Hussakof, L. 1911 A, 157.
1914 A, 266.
Huxley, T. H. 1862 A, xlix.
Jaekel, O. 1905 C, 137; fig. 2.
1906 A, 14, fig. 7.
1906 C, 155.
1911 A, 60; fig. 61.
1913 A, 78, fig. 1.
Jordan, D. S. 1905 A, i, 521 (Orthacanthus, Xenacanthus).
Jordan, D. S. 1919 B, 213 (Orthacanthus); 233 (Xenacanthus).
1923 A, 92 (Xenacanthus).
Kehrer, F. A. 1896 A, 348.
Kingsley, J. S. 1925 A, 29, fig. 29.
Koken, E. 1897 B, 253 (Xenacanthus).
1907 A, 268.
Luther, A. 1909 A, 14, 49.
Meek, A. 1916 A, 34, 38.
Osburn, R. C. 1907 A, 425.
1907 B, 172.
Oswald, F. 1911 A, 407, fig. 6.
Pompeckj, J. F. 1913 A, 1123, fig. 22.
Price, P. H. 1927 A, 228, text-fig. 9.
Reis, O. M. 1894 A, 61.
Reynolds, S. H. 1897 A, 130.
Schmalhausen, J. J. 1913 A, 21.
Sewertzoff, A. N. 1923 B.
1926 B, 578, fig. 12*c*.
Steinmann, G. 1907 A, 402, figs. 697, 698.
Stensiö, E. A. 1925 A, 206.
1925 B, 189.
Thomson, J. 1873 A, 187.
Traquair, R. H. 1898 B, 46.
Wellburn, E. D. 1901 B, 161.
Woodward, A. S. 1898 B, 20, 33, figs. 17, 18, 22, 26.
1915 B, lxv.
1921 B, 30, 33, fig. 1.
1922 C, 66, fig. 62.
1924 A, 108, fig. 2.
1924 B, 340.
Zierler, F. E. 1905 A, 511.
Zittel and Koken 1911 A, 43, fig. 55.
Zittel and Schlosser 1923 A, 50, figs. 66-69.
Zittel and Woodward 1902 A, 23.
Jordan (1923 A, 91) regards *Orthacanthus* as a genus distinct from *Xenacanthus*.

Xenacanthus arcuatus (Newb.).

Hay, O. P. 1902 A, 264 (Pleuracanthus).
Pennsylvanian (Coal-measures); Ohio.

Xenacanthus biserialis (Newb.).

Hay, O. P. 1902 A, 264 (Pleuracanthus).
Pennsylvanian (Coal-measures); Ohio.

Xenacanthus dilatatus (Newb.).

Hay, O. P. 1902 A, 264 (Pleuracanthus).
Pennsylvanian; Ohio.

Xenacanthus quadriseriatus (Cope).

Hay, O. P. 1902 A, 264 (Pleuracanthus).
Case, E. C. 1900 A, 700, pl. i, fig. 3 [P. (Orthacanthus)].
1915 A, 96 (Pleuracanthus).
Cope and Matthew 1915 A, pl. iii, fig. 1 (Orthacanthus, Pleuracanthus).
Hussakof, L. 1911 A, 158, pl. xxvi, fig. 3 (Pleuracanthus).
Pennsylvanian (Upper); Illinois: (Wichita, Clear Fork); Texas: (Enid); Oklahoma.

Xenacanthus sp. indet.

Van Tuyl, F. M. 1925 A, 149, 154 (Pleuracanthus).
Mississippian (Burlington, Keokuk); Iowa.

ORTHACANTHUS Agassiz. Type *O. cylindricus* Agassiz.

Hay, O. P. 1902 A, 264.
Barkas, W. J. 1874 D, 547.
Beyrich, E. 1848 B, 649.
Bronn, H. G. 1849 A, 540.
Davis, J. W. 1880 C, 61.
Goldfuss, A. 1847 A, 23, pl. v, figs. 9-11.
Goodrich, E. S. 1909 A, 193.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 213.
1923 A, 91, 92.

Orthacanthus gracilis Newb.

Hay, O. P. 1902 A, 264.
Case, E. C. 1900 A, 701, pl. i, fig. 4 [Pleuracanthus (Orthacanthus)].
1915 A, 96 (Pleuracanthus).
Hussakof, L. 1911 A, 158, pl. xxvi, fig. 4 (Pleuracanthus).
This species belongs not improbably to *Xenacanthus*.
Pennsylvanian (Upper); Ohio.

COMPSACANTHUS Newb. Type *Pleuracanthus lævis* Newb.

Hay, O. P. 1902 A, 265.
Barkas, W. J. 1874 D, 545.
Davis, J. W. 1880 C, 62.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 273 (Syn. of Pleuracanthus).
1923 A, 92.

Compsacanthus lævis Newb.

Hay, O. P. 1902 A, 265.
Pennsylvanian (Linton); Ohio.

DIACRANODUS Garman. Type *Didymodus ? compressus* Cope = *D. texensis* Cope.

Hay, O. P. 1902 A, 265.
Broili, F., 1904 B, 467.
Case, E. C. 1915 A, 124.
Hay, O. P. 1901 B, 66.
Hussakof, L. 1911 A, 159.
1914 A, 266.
Jordan, D. S. 1919 B, 186 (Dicranodus).
1923 A, 92.

Diacranodus platypternus (Cope).

Hay, O. P. 1902 A, 265.
Beede, J. W. 1907 A, 119.
Case, E. C. 1915 A, 96.
Eastman, C. R. 1903 B, 168 (Diplodus).
Hussakof, L. 1908 A, 28 (Pleurocanthus).
1911 A, 160, pl. xxx, fig. 8.
Permian (Wichita? Clear Fork?); Texas.

Diacranodus texensis (Cope).

Hay, O. P. 1902 A, 265.
Beede, J. W. 1907 A, 119, 139 (=D. compressus?).
Broili, F. 1904 B, 467, pls. xxiv, xxv.
Case, E. C. 1900 A, 701, pl. i, fig. 5 (Pleuracanthus compressus).
1902 B, 62, 63 (D. compressus?).
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, figs. 2-4 (D. texensis, Diplodus compressus).
Hickling, G. 1917 A, 79.
Hussakof, L. 1908 A, 28 (Pleurocanthus).
1911 A, 159, pls. xxviii, xxix, pl. xxx, fig. 9
Jordan, D. S. 1905 A, i, 521 (Dicranodus).
Stromer, E. 1912 A, 4, fig. 4.
Permian (Wichita? Clear Fork?); Texas: (Enid); Oklahoma.

Diacranodus sp. indet.

Wegeman, C. H. 1915 A, 25.
Permian (Wichita); Oklahoma.

DITTODUS Owen. Type *Diplodus gibbosus* Agassiz.

Hay, O. P. 1902 A, 265.
Anonymous 1898 C, 74 (Diplodus).
Atthey, T. 1868 C, 352, 372 (Dittodus); 371 (Diplodus).
Barkas, W. J. 1874 D, 546 (Diplodus).
Bronn, H. G. 1848 A, 427 (Diplodus).
1849 A, 650 (Diplodus).
Case, E. C. 1908 C, 576 (Diplodus).
1917 A, 125 (Diplodus).
Davis, J. W. 1880 C, 61 (Diplodus).
Eastman, C. R. 1907 B, 58 (Diplodus).
1908 A, 104 (Diplodus).
Hay, O. P. 1901 B, 66.
Hussakof and Bryant 1919 A, 144.
Jordan, D. S. 1905 A, i, 521; ii, 567.
1907 B, 186.
1919 B, 180.
1923 A, 92.
Price, P. H. 1927 A, 215, 219, pls. xiv, xix; text-fig. 10 (Diplodus); 228 (Dittodus).
Ridewood, W. G. 1896 A, 383 (Diplodus).
Thomson, J. 1872 A, 66 (Diplodus).
1873 A, 187 (Diplodus).
Twenhofel and Dunbar 1914 A, 160 (Diplodus).

Wellburn, E. D. 1901 B, 162 (Diplodus; syn. of Pleuracanthus).
Williamson, W. C. 1851 A, 680 (Diplodus).
Zittel and Koken 1911 A, 43 (Diplodus).
Zittel and Schlosser 1923 A, 52 (Dittodus, Diplodus).

Dittodus acinaces (Dawson).

Hay, O. P. 1902 A, 266.
Lambe, L. M. 1904 C, 19, 35, 40.
Carboniferous (Coal Measures); Nova Scotia.

Dittodus compressus (Newb.).

Hay, O. P. 1902 A, 266.
Eastman, C. R. 1902 B, 97 (Pleuracanthus).
1902 G, 540 (Pleuracanthus).
1903 B, 167, 194 (Pleuracanthus).
Hayden, F. V. 1872 A, 127 (Diplodus).
Meek, F. B. 1869 A, 3 (Diplodus).
1872 A, 127 (Diplodus).
Pennsylvanian; Ohio, Indiana, Illinois.

Dittodus gibbosus (Binney).

Hay, O. P. 1902 A, 266.
Coal-measures; England: Permian; Texas. The Texan specimens may have been wrongly identified.

Dittodus grabaui Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 147, text-fig. 52.
Upper Devonian (Genesee); New York.

Dittodus gracilis (Newb.).

Hay, O. P. 1902 A, 266.
Pennsylvanian; Ohio.

Dittodus latus (Newb.).

Hay, O. P. 1902 A, 266.
Eastman, C. R. 1902 B, 97 (Diplodus).
1902 G, 540 [Pleuracanthus (Diplodus)].
1903 B, 194 [Pleuracanthus (Diplodus)].
Hussakof, L. 1908 A, 28.
Pennsylvanian; Indiana, Ohio, Illinois.

Dittodus lucasi Hay.

Hay, O. P. 1902 A, 266.
Eastman, C. R. 1902 B, 97 (Diplodus).
1902 G, 540 [Pleuracanthus (Diplodus)].
1903 B, 194 [Pleuracanthus (Diplodus)].
Merrill, G. P. 1907 A, 10.
Pennsylvanian; Illinois.

Dittodus penetrans (Dawson).

Hay, O. P. 1902 A, 266.
Lambe, L. M. 1904 C, 19, 35, 40.
Whiteaves, J. F. 1903 B, 29 (Diplodus. This species?).
Pennsylvanian; Nova Scotia.

Dittodus priscus (Eastman).

Hay, O. P. 1902 A, 266.
Eastman, C. R. 1907 B, 20, 59, pl. i, figs. 7, 8 (Diplodus).
1908 A, 104, 286, pl. i, figs. 5, 13 (Diplodus).
Hussakof and Bryant 1919 A, 15, 17, 144, pl. xliv, figs. 3-3*b*, text-fig. 51.
Upper Devonian; Illinois: (Genesee); New York.

Dittodus striatus (Eastman).

Hay, O. P. 1902 A, 266.
Eastman, C. R. 1907 B, 20, 60, pl. i, figs. 10, 11 (Diplodus).
1908 A, 105, 286, pl. i, figs. 1, 16 (Diplodus).
Hussakof and Bryant 1919 A, 15, 17, 146.
Upper Devonian; Illinois: (Genesee); New York.

Dittodus washingtonensis (Stauffer and Schroyer).

Stauffer and Schroyer 1920 A, 147, pl. xiii, fig. 40 (Diplodus).
Permian (Washington); Ohio.

Dittodus sp. indet.

Doubtful remains of this genus are reported as follows:
Bell, W. A. 1913 A, 340, 343 (Diplodus). Pennsylvanian (Joggins); Nova Scotia.
Bradley, F. H. 1866 A, 71 (Diplodus). Devonian (Hamilton); New York.
Eastman, C. R. 1907 B, 20 (Diplodus). Upper Devonian; Illinois.
1908 A, 286 (Diplodus).
Hussakof and Bryant 1919 A, 19, 149. Upper Devonian (Portage); New York: (Tully); New York.
Twenhofel and Dunbar 1914 A, 160. Pennsylvanian; Kansas.
Williston, S. W. 1897 K, 395 ("Didymodus"). Permian; Kansas.

PROTODUS A. S. Woodward. Type *P. jexi* A. S. Woodward.

Hay, O. P. 1902 A, 266.
Eastman, C. R. 1902 B, 56.
1902 H, 150.
1903 D, 285.
1908 A, 100.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 92.
Whiteaves, J. F. 1907 B, 255.
Woodward, A. S. 1904 C, 188, fig. 2.
1915 B, lxvi, fig. 1.
1920 B, 5.
Zittel and Woodward 1902 A, 20.

Protodus jexi A. S. Woodward.

Hay, O. P. 1902 A, 266.
Eastman, C. R. 1907 B, 13.
1908 A, 275.
Jaekel, O. 1895 C, 161.
Lambe, L. M. 1904 C, 33, 40.
Whiteaves, J. F. 1907 B, 256.
Lower Devonian; New Brunswick.

THRINACODUS St. John and Worth. Type *T. nanus* St. John and Worth.

Hay, O. P. 1902 A, 266.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 380.
1923 A, 92.

Thrinacodus bicornis Newb.

Hay, O. P. 1902 A, 267.

Branson, E. B. 1906 A, 1394.
Mississippian (Salem); Indiana.

Thrinacodus nanus St. John and Worth.

Hay, O. P. 1902 A, 267.
Mississippian (Kinderhook); Iowa.

DOLIODUS Traquair. Type *Diplodus problematicus* A. S. Woodward.

Hay, O. P. 1902 A, 267.
Hay, O. P. 1901 B, 66.

Doliodus problematicus (A. S. Woodward).

Hay, O. P. 1902 A, 267.

Eastman, C. R. 1907 B, 13.
1908 A, 275.
Jaekel, O. 1895 C, 161 (Diplodus).
Lambe, L. M. 1904 C, 16, 33, 40.
Whiteaves, J. F. 1907 B, 257.
Lower Devonian; New Brunswick.

Order ACANTHODEI Owen.

Owen, R. 1846 E, 50.
Hay, O. P. 1902 A, 273 (Acanthodii).
Abel, O. 1919 A, 147.
1920 A, 332.
1921 A, 249 (Acanthodii).
Agassiz, L. 1844 D, 142 ("acanthodiens").
Arldt, T. 1923 A, 483 ("acanthoden").
Barrell, J. 1915 B, 392, 402 (Acanthodii).
Bridge, T. W. 1904 A, 440.
Bronn, H. G. 1849 A, 780 seq.
Cope, E. D. 1891 N, 15, 18.
Cunningham, J. T. 1912 A, 253 ("acanthodians").
Dean, B. 1894 A, 88, 105, 109, 111 ("acanthodians").
1900 A, 22, 28 (Acanthodia).
1902 A, 770 ("acanthodians).
1907 B, 220 (Acanthodia).
1909 C, 242 (Acanthodia).
1912 A, 227 ("acanthodians").
Dollo, L. 1906 B, 135 ("acanthodiens").
Eastman, C. R. 1902 B, 92 (Acanthodii).
1907 B, 23, 63 (Acanthodii).
1908 A, 59, 69, 95, 112 (Acanthodii).
Frech, F. 1897 A, 123 (Acanthodii).
Giebel, C. G. 1855 A, 113 (Acanthodii).
Gill, T. 1905 A, 657.
Goodrich, E. S. 1904 A, 492 (Acanthodii).
1908 A, 771 (Acanthodii).
1909 A, 187 (Acanthodii).
Gregory, W. K. 1907 D, 445.
1915 D, 320, 343 (Acanthodii).
Haller, G. 1926 A, 447, 456 (Acanthodi).
Hay, O. P. 1901 B, 69 (Acanthodii).
Huene, F. 1926 A, 260 ("acanthodi").
Hussakof and Bryant 1919 A, 127, 140 (Acanthodii).
Jaekel, O. 1911 A, 69, 72 (Acanthodi).
Jordan, D. S. 1905 A, i, 514; ii, 555.
1907 B, 758.
1923 A, 91.
Kiaer, J. 1924 A, 100, 101, 102, 104, 108, 110 (Acanthodii).
Lütken, C. 1868 C (Acanthodini).
Meek, A. 1916 A, 34, 36.
Owen, R. 1860 E, 130 (Acanthodii).
1866 A, 12.
Parker and Haswell 1897 A, 155 (Acanthodea).
Pompeckj, J. F. 1913 A, 1120 (Acanthodi).
Regan, C. T. 1906 A, 722 (Acanthodii).
Rosén, N. 1916 A, 10, 30 (Acanthodii).
Schlosser, M. 1917 A, 133, 134, 147 ("acanthodier").
Schuchert and Levene 1927 A, 288 ("acanthodians").
Steinmann, G. 1907 A, 405 (Acanthodini).
Stromer, E. 1912 A, 23, 47 (Acanthodii).
1920 A, 11, 14, 17 (Acanthodi).
Versluys, J. 1922 B, 102 (Acanthodi).
1922 C, 62 (Acanthodii).
Woodward, A. S. 1906 A, 313 (Acanthodii).
1906 C, 270 ("acanthodians").
1910 D, 31 ("acanthodians").
1911 C, 45 ("acanthodian sharks").
1917 A, 75 ("acanthodians").
1924 A, 106 ("acanthodians").
Zittel and Koken 1911 A, 46 (Acanthodi).
Zittel and Schlosser 1923 A, 47 (Acanthodi).
Zittel and Woodward 1902 A, 20 (Acanthodii).

GYRACANTHIDÆ Woodward.

Woodward, A. S. 1906 D, 3.
Goodrich, E. S. 1909 A, 192.

Hussakof and Bryant 1919 A, 124, 142.
Jordan, D. S. 1923 A, 92.

GYRACANTHUS Agassiz. Type *G. formosus* Agassiz.

Hay, O. P. 1902 A, 335.
Agassiz, L. 1835 D, 189.
Atthey, T. 1868 C, 368.
Barkas, W. J. 1874 D, 546.
Bronn, H. G. 1848 A, 559.
1849 A, 649.

Connell, A. 1835 A, 301.
1835 B, 191 (Lepidosteus).
Dollo, L. 1889 F, 335.
Eastman, C. R. 1907 B, 86.
1908 A, 114.
Goodrich, E. S. 1909 A, 192, fig. 165.

Gregory, W. K. 1915 D, 343.
Heilprin, A. 1887 A, 152.
Hussakof and Bryant 1919 A, 140.
Jordan, D. S. 1919 B, 186.
1923 A, 92.
Lambe, L. M. 1916 A, 198.
Osburn, R. C. 1907 A, 432.
Reis, O. M. 1894 A, 60.
Thomson, J. 1872 A, 66.
Woodward, A. S. 1924 A, 107.

Gyracanthus alleni Newb.

Hay, O. P. 1902 A, 335.
Hussakof, L. 1908 A, 47.
Newberry, J. S. 1874 G, 98.
Mississippian (Waverly); Ohio.

Gyracanthus compressus Newb.

Hay, O. P. 1902 A, 335.
Hussakof, L. 1908 A, 48.
Newberry, J. S. 1874 G, 98.
Mississippian (Waverly); Ohio: Indiana.

Gyracanthus? cordatus St. John and Worth.

Hay, O. P. 1902 A, 335.
Mississippian (Keokuk); Missouri.

Gyracanthus duplicatus Dawson.

Hay, O. P. 1902 A, 335.
Bell, W. A. 1913 A, 340, 343.
Lambe, L. M. 1904 C, 19, 35, 42.
Carboniferous (Joggins); Nova Scotia.

Gyracanthus incurvus Traquair.

Hay, O. P. 1902 A, 335.
Eastman, C. R. 1907 B, 13.
1908 A, 276.
Hussakof and Bryant 1919 A, 143.
Lambe, L. M. 1904 C, 16, 34, 42.
Whiteaves, J. F. 1907 B, 258.
Lower Devonian; New Brunswick.

Gyracanthus inornatus Newb.

Hay, O. P. 1902 A, 335.
Hussakof, L. 1908 A, 48.
Mississippian (Waverly); Ohio.

Gyracanthus magnificus Dawson.

Hay, O. P. 1902 A, 335.
Lambe, L. M. 1904 C, 18, 34, 42.
Mississippian; Cape Breton.

Gyracanthus primævus Eastman.

Eastman, C. R. 1908 A, 114, fig. 17.
Hussakof and Bryant 1919 A, 143.
Devonian (Marcellus); New York.

Gyracanthus sarlei Hussakof and Bryant.

Hussakof and Bryant 1919 A, 142, pl. lii, figs. 3-5.
Upper Devonian (Genesee); New York.

Gyracanthus sherwoodi Newb.

Hay, O. P. 1902 A, 335.
Butts, C. 1903 A, 991.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 21, 22, 87, 230, pl. iii, fig. 7.
1908 A, 287, 289.
Hussakof, L. 1908 A, 48.
Upper Devonian (Catskill and Chemung); Pennsylvania: (Chemung); New York.

Gyracanthus sp. indet.

Hussakof and Bryant 1919 A, 15, 144, pl. lii fig. 4.
Upper Devonian (Genesee); New York.

ORACANTHUS Agassiz. Type *O. milleri* Agassiz.

Hay, O. P. 1902 A, 334.
Barkas, W. J. 1874 D, 547.
Bronn, H. G. 1848 B, 847.
1849 A, 649.
Dames, W. 1898 C, 331.
Eastman, C. R. 1902 H, 150.
1917 A, 267.
Egerton, P. G. 1853 C, 282.
Etheridge, R. 1877 A, 307, pl. xiii, figs. 4-6.
Evans, H. M. 1904 A, 399.
Goodrich, E. S. 1909 A, 193.
Heilprin, A. 1889 A, 152.
Jordan, D. S. 1919 B, 186 (Type *O. mülleri* Ag.).
Woodward, A. S. 1915 B, lxix, fig. 2.

Oracanthus lineatus Newb.

Hay, O. P. 1902 A, 334.
Mississippian. (Locality and formation not given.)

Oracanthus multiseriatus Newb.

Hay, O. P. 1902 A, 334.
Claypole, E. W. 1903 A, 318.
Devonian (Helderberg); Ohio.

Oracanthus? obliquus St. John and Worth.

Hay, O. P. 1902 A, 334.
Mississippian (St. Louis); Illinois, Missouri, Iowa.

Oracanthus pnigeus Newb. and Worth.

Hay, O. P. 1902 A, 334.
Mississippian (Keokuk); Iowa.

Oracanthus rectus St. John and Worth.

Hay, O. P. 1902 A, 335.
Eastman, C. R. 1917 A, 268.
Mississippian (Chester); Illinois.

Oracanthus triangularis Eastman.

Eastman, C. R. 1917 A, 268, pl. v, figs. 5, 6.
St. John and Worthen 1883 A, pl. xxiv, fig. 2 (*O. vetustus fide* Eastman).
Mississippian (St. Louis); Missouri.

Oracanthus trigonalis (St. John and Worth.).

Hay, O. P. 1902 A, 335.
Mississippian (St. Louis); Missouri.

Oracanthus vetustus Leidy.

Hay, O. P. 1902 A, 335.
Abel, O. 1912 F, 569, fig. 442.
Eastman, C. R. 1902 E, 852.
1903 B, 213.
Eastman, C. R. 1917 A, 267, 268, pl. vi, fig. 2.
Karpinsky, A. P. 1925 A, 136.
Mississippian (Kinderhook, St. Louis, Chester?); Missouri, Illinois.

ACANTHOËSSIDÆ Hay.

Unless otherwise indicated the authors, as quoted, use the name Acanthodidæ.

Hay, O. P. 1902 A, 273 (Acanthoëssidæ).
Abel, O. 1919 A, 151.
Arldt, T. 1907 D, 635.
1923 A, 483, 490 ("acanthodiden").
Bridge, T. W. 1878 A, 722.
1904 A, 441.
Carus, V. 1875 A, 595.
Cope, E. D. 1891 N, 19.
Coulon, L. 1903 A, 136.
Dean, B. 1907 B, 209 ("acanthodians").
Eastman, C. R. 1907 B, 23.
Goodrich, E. S. 1909 A, 192.
Gregory, W. K. 1907 D, 445.
Hay, O. P. 1901 B, 66, 69.
Hilzheimer, M. 1913 A, 471.
Hoernes, R. 1886 A, 548.
Huxley, T. H. 1861 D, 457.
Jaekel, O. 1899 C, 249 ("acanthodier")
Jordan, D. S. 1905 A, i, 516; ii, 555.
Jordan, D. S. 1907 B, 758.
1923 A, 91.
Kiaer, J. 1924 A, 108 (Acanthodii).
Lönnberg, E. 1901 A.
Lütken, C. 1871 A, 292, 294 ("acanthodiens").
Osburn, R. C. 1907 A, 425.
1907 B, 173.
Owen, R. 1866 A, 12 (Acanthodei).
Pompeckj, J. F. 1913 A, 1121.
Powrie, J. 1870 A, 287.
Reis, O. M. 1894 A, 49 ("acanthodinen").
Sewertzoff, A. N. 1923 B, 106.
Stensiö, E. A. 1925 B, 163 ("acanthodians").
Traquair, R. H. 1880 A, 147.
1890 A, 21.
1893 E, 176 ("acanthodians").
Trouessart, E. L. 1906 A, 213.
Woodward, A. S. 1915 B, lxv ("acanthodians").
Zittel and Koken 1911 A, 47.
Zittel and Schlosser 1923 A, 48.
Zittel and Woodward 1902 A, 20.

ACANTHOËSSUS Agassiz. Type *A. bronni* Agassiz.

Unless otherwise indicated the authors, as quoted, use the name *Acanthodes* for this genus. It is antedated by *Acanthoëssus*.

Agassiz, L. 1832 A, 149.
Hay, O. P. 1902 A, 273 (Acanthoëssus).
Abel, O. 1912 F, 518.
1919 A, 152, figs. 113-115.
1920 A, 332, fig. 528.
Agassiz, L. 1833 A, 471.
1835 H, 204.
1844 C, 269.
1877 A, 124.
Allis, E. P. 1905 A, 488.
Barkas, W. J. 1874 D, 548.
Bridge, T. W. 1904 A, 442, fig. 251.
Bronn, H. G. 1848 A, 2.
1849 A, 656.
Case, E. C. 1926 B, 105.
Coulon, L. 1903 A, 136 (Acanthodes = Cheiracanthus).
Cunningham, J. T. 1897 A, 496.
Dean, B. 1894 A, 99.
1902 A, 768.
1902 C, 702.
1907 B, 209.
Deecke, W. 1913 A, 72.
Dollo, L. 1906 B, 135.
Eastman, C. R. 1900 G, 287.
1902 G, 536.
Goodrich, E. S. 1908 A, 771, fig. 204.
1909 A, 505, figs.
Haller, G. 1926 A, 455, fig. 3.
Hay, O. P. 1901 B, 66, 69.
Hoernes, R. 1886 A, 548.
Huxley, T. H. 1861 D, 444.
Jaekel, O. 1892 B, 156.
1899 C, 250, figs. 1, 2.
1902 A, 108.
1902 C, 610.
1903 A, 123.
1903 F, 48, fig. 10.
1905 C, 136, fig. 1.
1906 A, 10, figs. 4, 8.
1907 A, 180, fig. 6.
1911 A, 71, fig. 75.
1913 A, 79, fig. 2.
1918 A, 231, fig. 1.
1919 A, 84, 108.
1921 A, 225, fig. 6.
1927 A, 266 (Acanthodes).
Jordan, D. S. 1903 A, 135.
1905 A, i, 516; ii, 555.
1919 B, 177.
1923 A, 91.
Jordan and Evermann 1917 A, 141, 145, 146.
Kiaer, J. 1924 A, 102, 108.
Klaatsch, H. 1890 A, 144.
Koken, E. 1907 A, 269.
Lütken, C. 1868 C, 69, fig. 11.
Matthes, E. 1921 A, 220, 225.
Miner, R. W. 1925 A, 195.
Oswald, F. 1911 A, 407, fig. 4.
Pompeckj, J. F. 1913 A, 1120, figs. 18, 19.
Powrie, J. 1870 A, 287, 288, pl. x.
Reis, O. M. 1893 A, 495.
1894 A, 49.
Rosén, N. 1916 A, 9, fig. 4.
Smith, B. 1910 A, 662 ("acanthodian").
Traquair, R. H. 1879 B, 115.
1879 C, 129.

Traquair, R. H. 1890 H, 482, fig. 1.
1893 E, 177.
Whiteaves, J. F. 1907 B, 247 (Mesacanthus).
Woodward, A. S. 1900 E, 203.
1906 C, 271, fig. 4.
1922 C, 63, fig. 60.
1924 A, 107, fig. 1.
Zittel and Koken 1911 A, 47.
Zittel and Schlosser 1923 A, 48, figs. 63, 64.
Zittel and Woodward 1902 A, 21.

Acanthoëssus affinis (Whiteaves).

Hay, O. P. 1902 A, 273.
Eastman, C. R. 1902 B, 93, 95 (Mesacanthus).
1902 G, 536 (Acanthodes).
1907 B, 16 (Acanthodes).
1908 A, 280 (Acanthodes).
Lambe, L. M. 1904 C, 34, 41 (Acanthodes).
Smith, B. 1910 A, 663 (Acanthodes).
Whiteaves, J. F. 1907 B, 247 (Mesacanthus).
Zittel and Woodward 1902 B, 21 (Mesacanthus).
Upper Devonian; Quebec.

Acanthoëssus beecheri (Eastman).

Eastman, C. R. 1902 B, 94, 97, fig. 14 (Acanthodes).
Eastman, C. R. 1902 G, 537, fig. 2 (Acanthodes).
1903 B, 194 (Acanthodes).
Pennsylvanian (Mazon Creek); Illinois.

Acanthoëssus concinnus (Whiteaves).

Hay, O. P. 1902 A, 273.
Clarke, J. M. 1913 A, 113 (Acanthodes).
Eastman, C. R. 1902 B, 93 (Mesacanthus).
1907 B, 16 (Acanthodes).
1908 A, 280 (Acanthodes).
Hussakof and Bryant 1919 A, 141, pl. ii, figs. 2, 3; text-fig. 50 (Acanthodes).
Lambe, L. M. 1904 C, 34, 41 (Acanthodes).
Smith, B. 1910 A, 663 (Acanthodes).
Whiteaves, J. F. 1907 B, 246 (Acanthodes).
Upper Devonian (Scaumenac); Quebec.

Acanthoëssus marshi (Eastman).

Eastman, C. R. 1902 B, 93, 97, pl. vi, fig. 3; pl. vii, figs. 1, 2 (Acanthodes).
Eastman, C. R. 1901 A, 795 (Acanthodes sp).
1902 G, 536, fig. 1 (Acanthodes).
1903 B, 194 (Acanthodes).
Pennsylvanian (Mazon Creek); Illinois.

Acanthoëssus? pristis (Clarke).

Hay, O. P. 1902 A, 273.
Clarke and Luther 1904 A, 62 (Acanthodes).
Eastman, C. R. 1902 B, 92 (Acanthodes?).
1902 G, 536 (Acanthodes).
1907 B, 17, 64 (Acanthodes?).
1908 A, 113, 281 (Acanthodes?).
Merrill, G. P. 1907 A, 5 (Acanthodes?).
Smith, B. 1910 A, 663 (Acanthodes?).
Upper Devonian (Portage); New York.

Acanthoëssus semistriatus (A. S. Woodward).

Hay, O. P. 1902 A, 273.
Eastman, C. R. 1907 B, 13 (Acanthodes).
1908 A, 275 (Acanthodes).
Lambe, L. M. 1904 C, 34, 41 (Acanthodes).
Smith, B. 1910 A, 663 (Acanthodes).
Whiteaves, J. F. 1907 B, 256 (Mesacanthus).
Lower Devonian; New Brunswick.

Cheiracanthus Agassiz. Type *C. murchisoni* Agassiz.

Hay, O. P. 1902 A, 274.
Agassiz, L. 1844 C, 269.
Barkas, W. J. 1874 D, 548 (Sphagodus); 549 (Cheiracanthus).
Bronn, H. G. 1848 A, 285.
1849 A, 656.
Coulon, L. 1903 A, 136 (= Acanthodes).
Dean, B. 1902 A, 768.
1907 B, 209.
Dollo, L. 1889 F, 337 (Sphenacanthus).
Egerton, P. G. 1861 B, 1, pl. x.
Goodrich, E. S. 1909 A, 189, fig. 158.
Hay, O. P. 1901 B, 66.
Huxley, T. H. 1861 D, 458.
Jordan, D. S. 1905 A, i, 517.
1923 A, 91.
Klaatsch, H. 1890 A, 144.
Osborn, H. F. 1917 B, 170, fig.
Zittel and Koken 1911 A, 47.
Zittel and Schlosser 1923 A, 49.
Zittel and Woodward 1902 A, 21.

Cheiracanthus costellatus Traquair.

Hay, O. P. 1902 A, 274.
Eastman, C. R. 1907 B, 13.
1908 A, 275.
Lambe, L. M. 1904 C, 34, 41.
Smith, B. 1910 A, 663.
Whiteaves, J. F. 1907 B, 256.
Zittel and Woodward 1902 A, 27 (Sphenacanthus).
Devonian (Lower); New Brunswick.

DIPLACANTHIDÆ Cope.

Cope, E. D. 1891 N, 19.
Hay, O. P. 1902 A, 274.
Arldt, T. 1923 A, 483 ("diplicanthiden").
Bridge, T. W. 1904 A, 441.
Eastman, C. R. 1907 B, 23.
1908 A, 112.
1917 A, 237.
Gregory, W. K. 1907 D, 445.
Jaekel, O. 1911 A, 72 (Diplacanthi).
Jordan, D. S. 1905 A, i, 517; ii, 566.
1907 B, 758.
1923 A, 91.
Kiaer, J. 1924 A, 102.
Osburn, R. C. 1907 A, 425.
Zittel and Koken 1911 A, 48.
Zittel and Schlosser 1923 A, 49.
Zittel and Woodward 1902 A, 22.

DIPLACANTHUS Agassiz. Type *D. crassisimus* Duff.

Hay, O. P. 1902 A, 274.
Agassiz, A. 1844 C, 269.
1877 A, 124.
Barkas, W. J. 1874 D, 550.
Bridge, T. W. 1904 A, 440.
Bronn, H. G. 1848 A, 426.
1849 A, 656.
Dean, B. 1902 A, 768.
1907 B, 209.
Egerton, P. G. 1854 A, 369.
Hay, O. P. 1901 B, 66.
Jaekel, O. 1911 A, 72, fig. 76.
Jordan, D. S. 1919 B, 210.
1923 A, 91.
Kiaer, J. 1924 A, 103, fig. 47.
Osborn, H. F. 1916 E, 606, fig. 14.
1917 B, 167, 170, fig.
Powrie, J. 1870 A, 287, 289, pl. x.
Traquair, R. H. 1893 E, 177.
Zittel and Koken 1911 A, 48.
Zittel and Woodward 1902 A, 22.

Diplacanthus crassisimus Duff.

Hay, O. P. 1902 A, 274.
Clarke, J. M. 1913 A, 115 (D. striatus).
Dean, B. 1907 B, 218 (D. striatus).
Eastman, C. R. 1907 B, 16 (D. striatus).
1908 A, 280 (D. striatus).
Lambe, L. M. 1904 C, 34, 40 (D. striatus).
Smith, B. 1910 A, 663 (D. striatus).
Devonian (Lower Old Red); Scotland.
Upper Devonian (Scaumenac); Quebec.

Diplacanthus horridus Woodward.

Woodward, A. S. 1892 C, 482, pl. xiii, fig. 1.
Clarke, J. M. 1913 A, 115.
Eastman, C. R. 1907 B, 16.
1908 A, 280.
Lambe, L. M. 1904 C, 34, 40.
Smith, B. 1910 A, 663.
Whiteaves, J. F. 1907 B, 247.
Upper Devonian (Scaumenac); Quebec.

Diplacanthus sp. indet.

Cockerell, T. D. A. 1913 A, 246.
Ordovician; Colorado.

CLIMATIUS Agassiz. Type *C. reticulatus* Agassiz.

Hay, O. P. 1902 A, 274.
Abel, O. 1907 D, (161).
1912 F, 207, 518, fig. 142.
1920 A, 333, fig. 528.
1921 A, 249, fig. 91.
Barkas, W. J. 1874 D, 549.
Barrell, J. 1915 B, 394.
Böker, H. 1927 A, 36.
Bridge, T. W. 1904 A, 441.
Bronn, H. G. 1848 A, 308.
1849 A, 653.
Cope, E. D. 1891 N, 19.
Cunningham, J. T. 1912 A, 252.
Dean, B. 1902 A, 768.
1907 B, 209.
1909 C, 244, fig. 39.
Derjugin, K. 1910 B, 209.
Hay, O. P. 1901 B, 66.
Goodrich, E. S. 1909 A, 192, fig. 164.
Jordan, D. S. 1905 A, i, 516; ii, 563.
1919 B, 225.
1923 A, 91.
Kerr, J. G. 1900 A, 230.
Kiaer, J. 1924 A, 103, fig. 46.
Oswald, F. 1911 A, 407, fig. 2.
Powrie, J. 1870 A, 287, 289, pls. xiii, xiv.
Pompeckj, J. F. 1913 A, 1121.
Traquair, R. H. 1900 C, 22.
Woodward, A. S. 1897 C, 379.
1906 A, 271, fig. 4.
Zittel and Koken 1911 A, 48.
Zittel and Schlosser 1923 A, 49, fig. 65.
Zittel and Woodward 1902 A, 22.

Climatius latispinosus (Whiteaves).

Hay, O. P. 1902 A, 274 (Climatius?).
Eastman, C. R. 1907 B, 13.
1908 A, 276.
Lambe, L. M. 1904 C, 33, 41 (Climatius?).
Smith, B. 1910 A, 663 (Climatius?).
Whiteaves, J. F. 1907 B, 257 (Climatius?).
Lower Devonian; New Brunswick.

Superorder ARISTOSELACHII Hay.

Hay, O. P. 1902 A, 252, 795 (Aristoselachii); 274 (Euselachii).
Dean, B. 1902 C, 702 (Selacha).
1909 C, 243 (Euselachii).
Haeckel, E. 1868 A, 444 (Plagiostomi).
Hussakof and Bryant 1919 A, 127 (Euselachii).
Jordan, D. S. 1923 A, 97 (Euselachii).
Parker and Haswell 1897 A, 156 (Selachii).
Regan, C. T. 1906 A, 722, 739 (Euselachii).
1912 A, 837 (Euselachii).

Order SELACHII Richardson.

Richardson, J. 1836 A, 287.
Hay, O. P. 1902 A, 274 (Selacha).
Abel, O. 1912 F, 676 ("haifische").
1920 A, 329 ("plagiostomen").
Ahlborn, F. 1896 B, 1 ("haifische").
Allis, E. P. 1909 A, 202.
1913 A, 322 ("selachians").
Allis, E. P. 1915 A.
1917 A, 105.
1919 C, 256.
1922 B, 198.
1923 B.
1926 A, 166.
1926 B, 339 (Plagiostomi).

Anonymous 1898 A, 373 (Selachoidea).
Arldt, T. 1907 D, 681.
1923 A, 483 ("plagiostomen").
Baehr, W. B. 1906 A, 629 ("selachier").
Bardeleben, K. 1893 A, 168 ("selachier").
Barrell, J. 1915 B, 402.
Beer, G. R. 1924 B, 59 ("selachians").
1924 C, 289 ("selachians").
1926 A, 266.
Beyer, H. 1907 A, 266 ("selachier").
Bolk, L. 1914 A, 118 ("selachier").
1915 A, 106.
1922 B, 69.
Bonaparte, C. L. 1838 C, 197 (Selacha).
1839 A, 3 (Selacha).
1840 A, 44 (Selacha).
Braus, H. 1899 A, 520 ("haie").
1906 B, 549 ("selachier").
Bridge, T. W. 1878 A, 706.
1904 A, 442 (Plagiostomi).
Brohl, E. 1909 A, 345 ("selachier").
Carter, J. T. 1905 A, 136.
Carus, V. 1875 A, 598 (Plagiostomi).
Collinge, W. E. 1893 C, 269 (Selachia).
Cope, E. D. 1891 N, 15.
Dana, J. C. 1863 C, 343 ("selachians").
1906 B, 549 ("selachians").
Dean, B. 1900 A, 22.
1906 B, 152 ("sharks").
1916 A ("fishes").
Dollo, L. 1889 E, 152 ("requins").
Dombrowski, B. A. 1925 A, 79 ("selachier").
Dormitzer, M. 1852 A, 61 ("selachier").
Drüner, L. 1904 A, 266 ("selachier").
Eastman, C. R. 1907 B, 23, 64.
1908 A, 69.
Edgeworth, F. H. 1907 A, 530 ("selachians").
1926 A, 173.
Eimer, G. H. T. 1901 A, 262 ("selachier").
Eternod, A. C. F. 1900 A, 176 ("requins").
Frassetto, F. 1915 A ("selaci").
Fürbringer, M. 1902 A (Selacha).
Gaupp, E. 1905 D, 868 ("haie").
1910 C.
Gegenbaur, C. 1870 B, 448 ("selachier").
Gill, T. 1905 A, 657.
Goeppert, E. 1897 A, 244 ("selachier").
Goette, A. 1901 A, 548 ("selachier").
Goodrich, E. S. 1909 A, 135.
1918 A, 12 ("selachians").
Gregory, W. K. 1928 A, 3, fig. 2 ("sharks").
Haller, G. 1923 A, 95 ("selachier").
1924 A, 305 ("selachier").
1926 A, 449 ("selachier").
Hase, A. 1913 A ("selachier").
Hasse and Schwarck 1870 A, 36 ("selachier").
Haswell, W. A. 1884 A.
Huxley, T. H. 1863 F, 426 ("sharks, rays").
1876 E, 103 ("plagiostomes").
1881 A, 453 ("sharks").
Imms, A. D. 1905 A, 43 (Selachoidei).
Jaekel, O. 1901 A, 558 ("selachier").
1911 A, 55.
1926 A, 174 ("selachier").
1926 B, 43 ("selachier").
Jordan and Gilbert 1882 A, 12.
Kehrer, F. A. 1896 A, 349 ("selachier").
Kingsley, J. S. 1894 A, 638 ("sharks").
Klaatsch, H. 1890 A, 98, 172, 214 ("selachier").
1893 B, 654 ("selachier").
1893 C, 175 ("selachier").
Kryzanovsky, S. 1916 A, 235.
Laaser, P. 1900 A, 479 ("selachier").
1903 A, 551 ("selachier").
Lakjer, T. 1927 A, 284 ("selachier").
Lavocat, A. 1885 A, 32 ("plagiostomes").
Lawley, R. 1875 B, 63 (Placoidei).
Leunis and Ludwig 1883 A, 782 (Plagiostomata).
Leydig, F. 1873 B, 31 ("selachier").
Lönnberg, E. 1901 A.
1902 A.
Lubosch, W. 1909 A, 1 ("selachier").
Luther, A. 1909 A ("selachier").
Matthes, E. 1921 A, 212 ("selachier").
Meek, A. 1916 A, 38 (Plagiostomi).
Mollier, S. 1895 B, 10 ("selachier").
Müller, E. 1909 A, 469 ("selachier").
Müller and Henle 1838 A, 33 ("sharks").
Mummery, J. H. 1917 A, 251 (Plagiostomi).
Nauck, E. T. 1926 B, 73 ("selachier").
Noordenbos, W. 1905 B, 389.
Norman, E. W. 1926 A, 438, 458 (Euselachii).
Parker, G. H. 1904 A, 496 ("fishes").
Parker, W. K. 1881 C, 71 ("selachians").
Parker and Haswell 1897 A, 156 (Euselachii).
Pouchet and Chabry 1884 A, 186 ("sélaciens").
Rabinerson, A. 1925 A, 434, 449 ("selachier").
Radcliffe, L. 1917 A, 26 ("sharks").
Reynolds, S. H. 1897 A, 31, 63, 108.
Ridewood, W. G. 1921 A ("sharks and rays").
Röse, C. 1892 G, 140 ("selachier").
1897 A, 58 ("haifische").
Sabatier, A. 1898 A, 928 ("sélaciens").
1903 B, 1219 ("sélaciens").
Schlosser, M. 1917 A, 142 ("selachier").
Schmalhausen, J. J. 1916 C, 213.
Schoenichen, W. 1900 A, 502 ("haie").
Schuchert, C. 1914 B, 277 ("sharks").
1915 A, 685.
Secerov, S. 1911 A, 1.
Sewertzoff, A. N. 1926 A, 535 ("selachians").
Sewertzoff and Disler 1924 A, 345 ("selachier").
Shann, E. W. 1919 A, 532.
Stannius, H. 1854 A (Plagiostomi).
Steinmann, G. 1907 A, 400.
Stephan, P. 1900 A, 233 ("sélaciens").
Stromer, E. 1905 H, 216 ("haie").
Ussow, S. 1900 A, 233 ("selachier").
Van Wijhe, J. W. 1922 A, 291 ("selachier").
Veit, O. 1916 A, 375 ("selachier").
Wagner, R. 1843 A, 204 (Plagiostomi).
Weidenreich, F. 1926 A, 45, 53 ("selachier").
Weiler, W. 1922 A, 103.
Wells, G. A. 1917 A, 417.
White, J. W. 1905 A, 319 ("selachier").
Woodward, A. S. 1922 C, 67.
1924 B, 338.
Ziegler, H. E. 1923 A, 62 ("selachier").
Zittel and Koken 1911 A, 48.
Zittel and Schlosser 1923 A, 54.
Zittel and Woodward 1902 A, 25 (Plagiostomi)

Suborder SQUALIFORMES Goodrich.

Goodrich, E. S. 1909 A, viii, 151.
Unless otherwise indicated the authors, as quoted, use for this suborder the name Squali.
Hay, O. P. 1902 A, 275.
Abel, O. 1919 A, 118 (Plagiostomi).
Agassiz, L. 1844 D, 142 ("squalides").
1844 E, 332 ("sharks").
1854 A, 4 ("sharks").
Allis, E. P. 1918 B, 263 (Selachii).
1925 A, 76 (Selachii).
Ameghino, F. 1906 A, 463 ("squales").
Backman, G. 1915 A.
Bessels, E. 1869 A, 153 ("haie").
Beyer, H. 1907 A, 266 ("selachier").
Boas, J. E. V. 1914 B, 538 ("haie").
Bonaparte, C. L. 1831 A, 121 (Squalidæ).
1833 B, 1203 (Squalidæ).
1838 C, 198, 206 (Squalidæ).
1839 A, 4, 8 (Squalidæ).
1840 A, 45 (Squalidæ).
Braus, H. 1904 A, 411 ("haie").
1906 B, 558 ("haie").
Bridge, T. W. 1904 A, 442 (Selachii).
Brohl, E. 1909 A, 348 ("haie").
Cunningham, J. T. 1912 A, 246 (Selachii).
Cuvier, G. 1803 A, 166 ("squales").
1805 A.
1815 A, 123 ("squales").
Dana, J. D. 1863 B, 317 ("sharks").
Davidoff, M. 1879 A ("haie").
Dean, B. 1900 A, 22 (Selachoidei).
Deinse, A. B. 1916 A, 417 ("selachier").
Dohrn, A. 1884 A ("haie").
Dollo, L. 1889 F, 334.
1904 C, 47 ("sélaciens").
Duméril, A. 1856 A, 125.
Eimer, G. H. T. 1901 A, 61, 242 ("haie").
Fahrenholz, C. 1915 A, 394 ("haie").
Filatoff, D. 1907 A, 311 ("haie").
Fitzinger, L. J. 1873 A, 55 (Pleurochismata).
Forbes, H. O. 1879 A, 456 ("sharks").
Fürbringer, K. 1904 B, 464 ("squaliden").
Fürbringer, M. 1902 A ("haie").
1903 A, 361 (Selachii).
Garman, S. 1904 A, 246, 269 (Antacea).
1913 A, 10 (Antacea).
Gaupp, E. 1905 D, 834, 841 ("haie").
1910 C.
Gegenbaur, C. 1870 C, 405 ("haie").
1871 B ("haie").
Geoffrey, St. Hilaire 1807 C, 91 ("squales").
Gill, T. 1882 A, 967.
1885 A, lxiii.
Goetsch, W. 1920 A, 9 ("haie").
Greene, J. R. 1861 A, 227 (Squalidæ).
Haeckel, E. 1868 A, 443.
1873 A, 516, 585 (Squalacei).
Hatschek, B. 1893 A, 90 ("haie").
Huxley, T. H. 1869 G, 452.
Jaekel, O. 1913 A, 90 ("haie").
1913 C, 36 ("haie").
Jordan and Gilbert 1882 A, 12.
Kehrer, F. A. 1896 A, 347 ("haie").
Kingsley, J. S. 1885 A, 72.
Klaatsch, H. 1893 C, 181 (Squalidæ).
Küstlin, O. 1844 A ("haifische").
Latreille, P. A. 1825 A, 109 ("squalides").
Lavocat, A. 1885 A, 32 ("squales").
Leunis and Ludwig 1883 A, 782 (Selachoidei).
Lönnberg, E. 1902 A (Squalidæ).
Lubosch, W. 1909 A, 4 ("haie").
1911 B, 748 ("haie").
Lütken, C. 1868 C.
M'Donald, R. 1864 A, 166 ("sharks").
Meckel, J. F. 1825 A ("haifische").
Mivart, St. G. 1871 B, 380 ("sharks").
Müller, E. 1909 A, 473 (Acanthias).
Müller, J. 1841 B, cliii ("haie").
1845 A, 137 (Squalidæ).
Müller and Henle 1838 A, 34.
Norman, E. W. 1926 A, 452 (Pleurotremata).
Owen, R. 1839 G, 209 ("squales").
1846 E, 51 (Plagiostomi).
1848 B, 87 ("sharks").
1866 A, 13 (Selachii).
Parker and Haswell 1897 A, 156 (Squalida).
Pompeckj, J. F. 1913 A, 1124 (Selachoidei).
Priem, F. 1908 B ("squales").
Probst, J. 1886 B, 301 ("haie").
Rabl, C. 1901 A, 476 ("squaliden").
Rafinesque, C. S. 1815 A, 93 (Antacea).
Rauther, M. 1913 A, 1097 (Selachioidei).
Regan, C. T. 1906 A, 722 (Pleurotremata).
Ridewood, W. G. 1899 A, 46.
1921 A ("sharks").
Rosenberg, E. 1887 A, 31 ("selachier").
Ryder, J. 1886 A, 71.
Sabatier, A. 1898 A, 930 ("squales").
1903 B, 1219 ("squales").
Schauinsland, H. 1906 A, 393 ("squaliden").
Schlosser, M. 1898 D, 119 ("haie").
Schmalhausen, J. J. 1916 C, 207 ("sharks")
Seeley, H. G. 1872 B, 34 ("sharks").
Sewertzoff, A. N. 1896 A, 273 ("haie").
1897 A, 411, figs. 1-3 (Acanthias).
Shitkov, B. M. 1899 A, 256 ("haie").
Sloan, E. 1908 A, 335, 472 (Squalidæ).
Smith, H. M. 1916 A, 34 ("sharks").
Steinhard, O. 1903 A, 4 ("squaliden").
Steinmann, G. 1907 A, 400 (Squaloidei).
1908 A, 205 ("haie").
Steenstrup, J. 1861 A, 368 ("requins").
Stephan, P. 1900 A, 310 ("squales").
Stromer, E. 1905 C, 164 (Squaloidei).
1912 A, 19 (Squaloidei).
Terra, P. 1911 A, 199 (Squalides).
Veit, O. 1916 A, 369 ("haie").
1924 A, 379 ("haifische").
Wagner, R. 1843 A ("haifische").
Waldheim, F. 1835 A, 234 ("requins").
Weber, E. 1821 A, 1060.
Wells, G. A. 1917 A, 417 (Acanthias).
Wilbrand, J. B. 1824 A, 933 ("haye").
Williamson, W. C. 1851 A, 669 ("sharks").
Woodward, A. S. 1898 B, 40 (Selachoidei).
1921 B, 37 (Selachii).
1922 C, 68.

Superfamily PETALODONTOIDÆ new form.

Hay, O. P. 1902 A, 275.
Jordan, D. S. 1923 A, 92 (Janassides).
Woodward, A. S. 1921 B, 34 (Bradydonti).

PETALODONTIDÆ Newberry and Worthen.

Hay, O. P. 1902 A, 275.
Abel, O. 1919 A, 135.
Arldt, T. 1907 D, 672.
1923 A, 487.
Bridge, T. W. 1904 A, 446.
Brongniart, C. 1888 C, 46 ("pétalodontidés").
Cope, E. D. 1891 N, 16.
Dean, B. 1906 B, 136 ("petalodontids").
Dollo, L. 1889 F, 340.
Eastman, C. R. 1903 B, 170.
1917 A, 256.
Fuchs, T. 1900 A, 7 ("petalodonten").
Goodrich, E. S. 1909 A, 167.
Gregory, W. K. 1907 D, 446.
Hay, O. P. 1901 B, 66-69.
Jaekel, O. 1901 A, 557 ("petalodonten").
Jordan, D. S. 1905 A, i, 554; ii, 585.
1907 B, 211, 759.
1923 A, 93 (Janassidæ).
Pompeckj, J. F. 1913 A, 1129.
Sauvage, H. E. 1901 E, 70 ("petalodontides").
Schlosser, M. 1917 A, 133, 134, 147 ("petalodontiden").
Stromer, E. 1912 A, 22.
Trouessart, E. L. 1906 A, 213 ("petalodontes").
Woodward, A. S. 1919 B, 380 ("petalodonts").
1922 C, 66.
1924 A, 109.
Zittel and Koken 1911 A, 61.
Zittel and Schlosser 1923 A, 67 (Petalodontidæ).
Zittel and Woodward 1902 A, 37.

JANASSA Münster. Type *Trilobites bituminosus* Schlotheim = *J. angulata* Münster.

Hay, O. P. 1902 A, 275.
Abel, O. 1919 A, 137, fig. 101.
Agassiz, L. 1844 C, 267.
Barkas, W. J. 1874 D, 548.
Bronn, H. G. 1848 A, 604 (Ianassa).
1849 A, 647 (Ianassa).
Case, E. C. 1908 C, 576 (Janassa, Strigilina).
1915 A, 124.
1926 B, 196.
Dean, B. 1906 B, 136.
Eastman, C. R. 1900 F, 581.
1903 B, 170.
1917 A, 256.
Hay, O. P. 1901 B, 66, 69 (Janassa, Climaxodus).
Hussakof, L. 1911 A, 156.
Jaekel, O. 1909 D, 717 (Janassidæ).
1911 A, 56, fig. 52.
Jordan, D. S. 1905 A, i, 554.
1907 B, 211.
1919 B, 176.
1923 A, 93.
Pompeckj, J. F. 1913 A, 1129, fig. 33.
Sauvage, H. E. 1901 E, 71.
Schlosser, M. 1917 A, 134.
Woodward, A. S. 1919 B, 380.
1920 B, 1, 5.
1921 B, 34, fig. 3.
1922 C, 67, fig. 64.
1924 A, 110.
Zittel and Koken 1911 A, 62, fig. 109.
Zittel and Schlosser 1923 A, 68, figs. 110, 111.
Zittel and Woodward 1902 A, 38.

Janassa angularis Branson.

Branson, E. B. 1916 A, 647, pl. ii, figs. 5, 6.
Pennsylvanian (Embar); Wyoming.

Janassa brevis (Newb.).

Hay, O. P. 1902 A, 276.
Pennsylvanian (Coal-measures); Ohio.

Janassa gurleiana Cope.

Hay, O. P. 1902 A, 276.
Case, E. C. 1900 A, 700; pl. i, fig. 2 (J. gurleyana).
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, fig. 12.
Hussakof, L. 1911 A, 156; pl. xxvi, fig. 2 (J. gurleyana).
Pennsylvanian (Coal-measures); Illinois.

Janassa maxima Eastman.

Eastman, C. R. 1903 B, 172; pl. ii, fig. 21; pl. iii, fig. 24; text-fig. 5.
Pennsylvanian (Atchison); Nebraska.

Janassa ordiana Cope.

Hay, O. P. 1902 A, 276.
Beede, J. W. 1907 A, 120.
Permain; Texas.

Janassa strigilina Cope.

Hay, O. P. 1902 A, 276.
Case, E. C. 1900 A, 699; pl. i, fig. 1.
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, fig. 11.
Hussakof, L. 1911 A, 156; pl. xxvi, fig. 1.
Pennsylvanian (Upper); Illinois.

Janassa unguicula Eastman.

Eastman, C. R. 1903 B, 173; pl. ii, fig. 13; text-fig. 6.
Branson, E. B. 1916 A, 646; pl. ii, figs. 7-18.
Woodruff, E. G. 1906 A, 290; pl. xviii, fig. 8.
Pennsylvanian; Nebraska, Illinois, Wyoming.

Janassa unguiformis (Newb. and Worth.).

Hay, O. P. 1902 A, 276 (Peltodus).
Branson, E. B. 1916 A, 645; pl. ii, figs. 7, 7a.
Pennsylvanian; Illinois, Wyoming.

CLIMAXODUS M'Coy. Type *C. imbricatus* M'Coy.

M'Coy, F. 1848 A, 128.
Hay, O. P. 1902 A, 275 (Janassa, in part).
Barkas, W. J. 1869 A, 42.
Hay, O. P. 1901 B.
Jordan, D. S. 1919 B, 239.
1923 A, 93.
Woodward, A. S. 1919 B, 379.
1920 B, 1, 5.
Woodward, A. S. 1921 B, 34.
1922 C, 67
1924 A, 109.
Zittel and Schlosser 1923 A, 68.

This genus is recognized by A. S. Woodward (as cited) as being distinct from *Janassa*. Some of the American species referred to *Janassa* may belong to *Climaxodus*.

PELTODUS Newb. and Worth. Type *P. unguiformis* Newb. and Worth.

Hay, O. P. 1902 A, 276.
Barkas, W. J. 1874 D, 547.
Davis, J. W. 1884 A, 634.
Eastman, C. R. 1903 B, 174.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 359 (Syn. of Janassa).
1923 A, 93.
Woodward, A. S. 1920 B, 4.

Peltodus? plicomphalus St. John and Worth.
Hay, O. P. 1902 A, 276.
Mississippian (Chester); Illinois.

Peltodus pulvinulus Newb. and Worth.
Hay, O. P. 1902 A, 276.
Mississippian; Illinois.

Peltodus quadratus St. John and Worth.
Hay, O. P. 1902 A, 276.
Mississippian (St. Louis); Illinois, Missouri.

Peltodus transversus St. John and Worth.
Hay, O. P. 1902 A, 276.
Pennsylvanian; Illinois.

TANAODUS St. John and Worth. Type *T. bellicinctus* St. John and Worth.

Hay, O. P. 1902 A, 276.
Eastman, C. R. 1903 B, 174.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 380.
1923 A, 93.
Woodward, A. S. 1920 B, 4.

Tanaodus angularis (Newb. and Worth.).
Hay, O. P. 1902 A, 276.
Meek, F. B. 1869 A, 3 (Deltodus angulatus This species?).
Pennsylvanian; Illinois.

Tanaodus bellicinctus St. John and Worth.
Hay, O. P. 1902 A, 276.
Mississippian (Chester); Illinois.

Tanaodus depressus St. John and Worth.
Hay, O. P. 1902 A, 276.
Mississippian (Chester); Illinois.

Tanaodus gracillimus (Newb. and Worth.).
Hay, O. P. 1902 A, 276.
Mississippian (Burlington); Iowa.

Tanaodus grossiplicatus St. John and Worth.
Hay, O. P. 1902 A, 276.
Mississippian (Chester); Illinois.

Tanaodus multiplicatus (Newb. and Worth.).
Hay, O. P. 1902 A, 277.
Brongniart, C. 1888 C, 47 (Tanoodus).
Mississippian (Burlington); Iowa.

Tanaodus obscurus (Leidy).
Hay, O. P. 1902 A, 277.
Mississippian (Keokuk); Illinois.

Tanaodus polymorphus St. John and Worth.
Hay, O. P. 1902 A, 277.
Mississippian (Chester); Illinois.

Tanaodus prænuntius St. John and Worth.
Hay, O. P. 1902 A, 277.
Mississippian (St. Louis); Illinois, Iowa, Missouri.

Tanaodus pumilis St. John and Worth.
Hay, O. P. 1902 A, 277.
Mississippian (St. Louis); Illinois, Iowa.

Tanaodus sculptus St. John and Worth.
Hay, O. P. 1902 A, 277.
Mississippian (St. Louis); Iowa, Illinois, Missouri.

Tanaodus sublunatus St. John and Worth.
Hay, O. P. 1902 A, 277.
Mississippian (St. Louis); Illinois.

CYMATODUS Newb. and Worth. Type *C. oblongus*, Newb. and Worth.

Hay, O. P. 1902 A, 277.
Barkas, W. J. 1874 D, 546.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 359 (Syn.? of Janassa).
1923 A, 93.

Cymatodus oblongus Newb. and Worth.
Hay, O. P. 1902 A, 277.
Pennsylvanian; Illinois.

THORACODUS Cope. Type *T. emydinus* Cope.

Hay, O. P. 1902 A, 277.
Hay, O. P. 1901 B, 66, 69.
Jordan, D. S. 1923 A, 93.

Thoracodus emydinus Cope.

Hay, O. P. 1902 A, 277.
Case, E. C. 1900 A, 702.
Permian; Illinois.

FISSODUS St. John and Worth. Type *F. bifidus* St. John and Worth.

Hay, O. P. 1902 A, 277 (Fissodus, Cholodus).
Branson, E. B. 1916 A, 647.
Eastman, C. R. 1903 B, 174.
Etheridge, R. 1877 A, 306; pl. xiii, figs. 2, 3.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 320.
1923 A, 93.
Zittel and Koken 1911 A, 62.
Zittel and Schlosser 1923 A, 68.
Zittel and Woodward 1902 A, 39.

Fissodus bifidus St. John and Worth.

Hay, O. P. 1902 A, 277.
Mississippian (Chester); Illinois.

Fissodus dentatus Eastman.

Eastman, C. R. 1903 B, 175; pl. ii, fig. 12.
Pennsylvanian (Missourian); Kansas.

Fissodus inæqualis (St. John and Worth.).

Hay, O. P. 1902 A, 277 (Cholodus).
Branson, E. B. 1916 A, 647.
Eastman, C. R. 1903 B, 174; pl. ii, fig. 11; pl. iii, fig. 26.
Woodruff, E. G. 1906 A, 290; pl. xviii, fig. 6.
Pennsylvanian (Missourian); Nebraska, Kansas, Iowa, Illinois, Missouri, Wyoming.

Fissodus tricuspidatus St. John and Worth.

Hay, O. P. 1902 A, 277.
Mississippian (Chester); Illinois.

PETALORHYNCHUS Agassiz. Type *Petalodus psittacinus* M'Coy.

Agassiz, L. 1862, in Morris and Roberts, Quart Jour. Geol., xviii, 101.
Hay, O. P. 1902 A, 278.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 547.
Eastman, C. R. 1903 B, 171.
Etheridge, R. 1875 A, 242; pl. viii, figs. 3, 4
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 93.
Woodward, A. S. 1924 A, 109.
Zittel and Koken 1911 A, 61.
Zittel and Schlosser 1923 A, 68.
Zittel and Woodward 1902 A, 38.

Petalorhynchus distortus St. John and Worth.

Hay, O. P. 1902 A, 278.
Mississippian (St. Louis); Illinois, Missouri, Iowa.

Petalorhynchus pseudosagittatus St. John and Worth.

Hay, O. P. 1902 A, 278.
Mississippian (St. Louis); Illinois, Missouri, Iowa.

Petalorhynchus spatulatus St. John and Worth.

Hay, O. P. 1902 A, 278.
Mississippian (St. Louis); Illinois, Iowa.

Petalorhynchus striatus Newb. and Worth.

Hay, O. P. 1902 A, 278.
Mississippian (Burlington); Illinois.

PETALODUS Owen. Type *P. hastingsiæ* Agassiz.

Owen, R. 1845 B (1840), 61.
Hay, O. P. 1902 A, 278.
Agassiz, L. 1844 C, 267.
1844 D, 142.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 547.
Bronn, H. G. 1848 B, 949.
1849 A, 646.
Eastman, C. R. 1903 B, 171, 175.
1917 A, 257.
Etheridge, R. 1875 A, 244, pl. viii, figs. 5, 6.
Hay, O. P. 1901 B, 66.
Hayden, F. V. 1872 A, 132.
Heilprin, A. 1887 A, 300.
Jaekel, O. 1900 A, 146.
Jordan, D. S. 1905 A, i, 554.
1907 B, 211.
Jordan, D. S. 1919 B, 207.
1923 A, 93 (Syn.? of Ctenoptychius).
M'Coy, F. 1849 A, 141.
Owen, R. 1845 B, 61, 62, pl. xxii, figs. 3-5.
1849 D, 42.
1866 A, 371.
Sauvage, H. E. 1901 E, 71.
Woodward, A. S. 1924 A, 109.
Zittel and Koken 1911 A, 61.
Zittel and Schlosser 1923 A, 67.
Zittel and Woodward 1902 A, 38.

Petalodus arcuatus St. John.

Hay, O. P. 1902 A, 280 (Chomatodus).
Eastman, C. R. 1903 B, 177.
Hayden, F. V. 1872 A, 127.

Meek, F. B. 1869 A, 3 (Chomatodus; name only).
1872 A, 100, 102, 127 (Chomatodus).
St. John and Worthen 1875 A, pl. x, figs. 23*a*-23*d* (Chomatodus).
Pennsylvanian; Iowa: (Missourian); Nebraska.

Petalodus curtus Newb. and Worth.
Hay, O. P. 1902 A, 278.
Mississippian (Keokuk); Illinois, Iowa.

Petalodus hybridus St. John and Worth.
Hay, O. P. 1902 A, 278.
Mississippian (St. Louis); Illinois.

Petalodus knappi Newb.
Hay, O. P. 1902 A, 278.
Mississippian (Keokuk); Indiana.

Petalodus linguifer Newb. and Worth.
Hay, O. P. 1902 A, 278.
Branson, E. B. 1906 A, 1379, pl. xli, figs. 13-15.
Mississippian (Chester); Illinois, Missouri: (Salem); Indiana.

Petalodus ohioensis Safford.
Hay, O. P. 1902 A, 278.
Eastman, C. R. 1903 B, 176; pl. ii, figs. 17, 18; pl. iii, fig. 27 (P. alleghaniensis).
Hayden, F. V. 1872 A, 127 (P. destructor).
Hussakof and Bryant 1919 A, 149.
Mason, S. C. 1883 A, 13 (P. alleghaniensis).
Meek, F. B. 1869 A, 3 (P. destructor).
1872 A, 96, 127 (P. destructor).
Newberry, J. S. 1861 A, 38 (P. alleghaniensis).
1874 G, 156 (P. alleghaniensis).
Woodruff, E. G. 1906 A, 288, pl. xviii, fig. 4 (P. alleghaniensis).
Worthen, A. H. 1866 A, 61 (P. destructor).
Zittel and Koken 1911 A, 61, fig. 105 (P. destructor).
Zittel and Schlosser 1923 A, 67, fig. 109 (P. destructor).
Zittel and Woodward 1902 A, 38, fig. 75 (P. alleghaniensis).
Pennsylvanian; Ohio, Illinois, Iowa, Nebraska, Arkansas, Pennsylvania; Permo-Carboniferous; Nebraska.

Petalodus proximus St. John and Worth.
Hay, O. P. 1902 A, 279.
Pennsylvanian; Illinois.

Petalodus sp. indet.
Stevenson, J. J. 1907 A, 168.
Pennsylvanian (Ames); West Virginia.

ANTLIODUS Newb. and Worth. Type *A. mucronatus* Newb. and Worth.

Hay, O. P. 1902 A, 279.
Barkas, W. J. 1874 D, 544.
Hay, O. P. 1901 B, 66.
Hayden, F. V. 1872 A, 132.
Jordan, D. S. 1919 B, 342 (Syn. of Petalodus). (Type said to be *A. parvulus*).
1923 A, 93.

Antliodus arcuatus Newb.
Hay, O. P. 1902 A, 279.
Branson, E. B. 1906 A, 1394.
Hussakof, L. 1908 A, 28.
Mississippian (Salem); Indiana.

Antliodus cucullus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Keokuk); Illinois.

Antliodus gracilis St. John and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Warsaw); Illinois.

Antliodus minutus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Branson, E. B. 1906 A, 1394.
Brongniart, C. 1888 C, 47.
Mississippian (Salem); Indiana.

Antliodus mucronatus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (St. Louis); Illinois.

Antliodus parvulus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Burlington); Illinois.

Antliodus perovalis St. John and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Warsaw); Illinois.

Antliodus politus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Keokuk); Illinois.

Antliodus robustus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Chester); Illinois.

Antliodus sarcululus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Newberry and Worthen 1870 A, pl. ii, figs. 8-8b.
Mississippian (Burlington); Iowa.

Antliodus similis Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Keokuk); Illinois, Indiana.

Antliodus simplex Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Burlington); Iowa.

Antliodus sulcatus Newb. and Worth.
Hay, O. P. 1902 A, 279.
Mississippian (Keokuk); Illinois.

CHOMATODUS Agassiz. Type *C. cinctus* Agassiz.

Hay, O. P. 1902 A, 279.
Agassiz, L. 1844 C, 267.
Barkas, W. J. 1874 D, 545.
Brongniart, C. 1888 C, 46 (Chromotodus).
Coulon, L. 1903 A, 130.
Eastman, C. R. 1903 B, 203.

Eastman, C. R. 1909 A, 488.
1917 A, 257.
Giebel, C. G. 1855 A, 115.
Hay, O. P. 1901 B, 66.
Hayden, F. V. 1872 A, 132.
Heilprin, A. 1887 A, 300.
Jordan, D. S. 1919 B, 190.
1923 A, 94.
Savage, T. E. 1902 A, 257.
Woodward, A. S. 1920 B, 4.

Chomatodus affinis Newb. and Worth.
Hay, O. P. 1902 A, 280.
Mississippian (Keokuk); Illinois.

Chomatodus angustus Newb.
Hay, O. P. 1902 A, 280.
Branson, E. B. 1906 A, 1394.
Mississippian (Salem); Indiana.

Chomatodus comptus St. John and Worth.
Hay, O. P. 1902 A, 280.
Eastman, C. R. 1903 B, 203.
Mississippian (Burlington); Iowa.

Chomatodus costatus Newb. and Worth.
Hay, O. P. 1902 A, 280.
Mississippian (Keokuk); Illinois.

Chomatodus cultellus Newb. and Worth.
Hay, O. P. 1902 A, 280.
Mississippian (Chester); Illinois.

Chomatodus elegans Newb. and Worth.
Hay, O. P. 1902 A, 280.
Mississippian (Keokuk); Iowa.

Chomatodus inconstans St. John and Worth.
Hay, O. P. 1902 A, 280 (C. chesterensis, C. inconstans, C. varsouviensis).
Branson E. B. 1906 A, 1380, pl. xli, figs. 29-31.
Eastman, C. R. 1903 B, 204, pl. iv, figs. 32-34 (C. chesterensis, C. varsouviensis are syns.).
Mississippian (St. Louis, Keokuk, Chester); Iowa, Illinois: (Salem); Indiana, Missouri.

Chomatodus incrassatus St. John and Worth.
Hay, O. P. 1902 A, 280.
Mississippian (St. Louis); Illinois, Iowa, Missouri.

Chomatodus insignis (Leidy).
Hay, O. P. 1902 A, 280.
Mississippian (St. Louis); Missouri, Illinois.

Chomatodus lanesvillensis Branson.
Branson, E. B. 1906 A, 1381, pl. xlii, figs. 15-18.
Mississippian (Salem); Indiana.

Chomatodus loriformis Newb. and Worth.
Hay, O. P. 1902 A, 280.
Mississippian (Keokuk); Illinois.

Chomatodus molaris Newb. and Worth.
Hay, O. P. 1902 A, 280.
Mississippian (Keokuk); Illinois.

Chomatodus newberryi Hay.
Hay, O. P. 1902 A, 280.
Branson, E. B. 1906 A, 1394 (C. obliquus).
Mississippian (Salem); Indiana.

Chomatodus parallelus St. John and Worth.
Hay, O. P. 1902 A, 280.
Branson, E. B. 1906 A, 1379.
Mississippian (Warsaw); Illinois, Missouri: (Salem); Indiana.

Chomatodus pusillus Newb. and Worth.
Hay, O. P. 1902 A, 280.
Branson, E. B. 1906 A, 1394.
Mississippian (Keokuk); Illinois: (Salem); Indiana.

Chomatodus selliformis Newb.
Hay, O. P. 1902 A, 280.
Branson, E. B. 1906 A, 1394.
Mississippian (St. Louis); Illinois: (Salem); Indiana.

LISGODUS St. John and Worth. Type *L. curtus* St. John and Worth.

Hay, O. P. 1902 A, 281.
1901 B, 66.
Jordan, D. S. 1919 B, 380 (Syn.? of Petalodus).
1923 A, 93.

Lisgodus affinis Newb.
Hay, O. P. 1902 A, 281.
Branson, E. B. 1906 A, 1394.
Mississippian (St. Louis); Illinois, Missouri: (Salem); Indiana.

Lisgodus curtus St. John and Worth.
Hay, O. P. 1902 A, 281.
Mississippian (Burlington); Iowa, Illinois (Keokuk); Illinois, Missouri.

Lisgodus selluliformis St. John and Worth.
Hay, O. P. 1902 A, 281.
Mississippian (St. Louis); Illinois, Missouri.

Lisgodus serratus St. John and Worth.
Hay, O. P. 1902 A, 281.
Mississippian (Burlington); Iowa, Illinois.

CALOPODUS St. John and Worth. Type *C. apicalis* St. John and Worth.

Hay, O. P. 1902 A, 281.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 93.

Calopodus apicalis St. John and Worth.
Hay, O. P. 1902 A, 281.
Pennsylvanian; Iowa.

CTENOPTYCHIUS Agassiz. Type *C. apicalis* Agassiz.

Hay, O. P. 1902 A, 281 (Ctenoptychius, Ctenopetalus); 282 (Harpacodus).
Agassiz, L. 1844 C, 267, 268.
1862, in Morris and Roberts, Quart. Jour. Geol., xviii, 100 (Ctenopetalus).
Arldt, T. 1923 A, 487 (Ctenoptychius, Ctenopetalus, Harpacodus).
Barkas, T. P. 1869 B, 43, figs. 1, 2.
1874 D, 545 (Ctenoptychius, Ctenopetalus); 546 (Harpacodus).
Bronn, H. G. 1848 A, 356.
1849 A, 646.
Eastman, C. R. 1903 B, 171, 176.
1917 A, 257.
Etheridge, R. 1875 A, 244.
Giebel, C. G. 1855 A, 115, pl. xlviii.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1907 B, 212.
1919 B, 320 (Ctenopetalus; syn. of Ctenoptychius).
1923 A, 93.
Woodward, A. S. 1924 A, 109.
Zittel and Koken 1911 A, 63.
Zittel and Schlosser 1923 A, 69.
Zittel and Woodward 1902 A, 39.

Ctenoptychius acuminatus (St. John and Worth.).

Hay, O. P. 1902 A, 282.
Mississippian (Kinderhook); Iowa.

Ctenoptychius bellulus (St. John and Worth.).

Hay, O. P. 1902 A, 281 (Ctenopetalus).
Mississippian (St. Louis); Iowa, Illinois.

Ctenoptychius compactus (St. John and Worth.).

Hay, O. P. 1902 A, 282 (Harpacodus compactus, H. occidentalis).
Eastman, C. R. 1903 B, 178 (H. occidentalis a syn.).
Mississippian (Chester); Illinois.

Ctenoptychius cristatus Dawson.

Hay, O. P. 1902 A, 282.
Bell, W. A. 1913 A, 340, 343.
Lambe, L. M. 1904 C, 19, 35, 41.
Whiteaves, J. F. 1903 B, 29 (This species?).
Carboniferous; Nova Scotia.

Ctenoptychius limatulus (St. John and Worth.).

Hay, O. P. 1902 A, 281 (Ctenopetalus).
Mississippian (Chester); Illinois.

Ctenoptychius medius (St. John and Worth.).

Hay, O. P. 1902 A, 281 (Ctenopetalus).
Mississippian (Chester); Illinois.

Ctenoptychius occidentalis (St. John and Worth.).

Hay, O. P. 1902 A, 281 (Ctenopetalus).
Eastman, C. R. 1903 B, 178, pl. ii, fig. 10.
Pennsylvanian; Iowa: (Missourian); Nebraska.

Ctenoptychius pertenuis St. John and Worth.

Hay, O. P. 1902 A, 282.
Mississippian (Chester); Illinois.

Ctenoptychius stevensoni St. John and Worth.

Hay, O. P. 1902 A, 282.
Newberry, J. S. 1874 G, 156 (Peripristis n. sp.).
Pennsylvanian; West Virginia.

Ctenoptychius vinosus (St. John and Worth.).

Hay, O. P. 1902 A, 281 (Ctenopetalus).
Mississippian (Keokuk); Iowa.

POLYRHIZODUS M'Coy. Type *P. magnus* M'Coy.

Hay, O. P. 1902 A, 282.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 546, 548 (Dactylodus, Polyrhizodus).
Cushing, H. P. 1912 A, 581.
Eastman, C. R. 1917 A, 257.
Goodrich, E. S. 1909 A, 167, fig. 133.
Hay, O. P. 1901 B, 66.
Hoernes, R. 1886 A, 543.
Jaekel, O. 1911 A, 57, fig. 53.
Jordan, D. S. 1907 B, 212.
1919 B, 239.
1923 A, 93.
Pompeckj, J. F. 1913 A, 1129.
Sauvage, H. E. 1901 E, 71.
Zittel and Koken 1911 A, 62.
Zittel and Schlosser 1923 A, 68.
Zittel and Woodward 1902 A, 39.

Polyrhizodus amplus St. John and Worth.

Hay, O. P. 1902 A, 282.
Mississippian (St. Louis); Illinois, Missouri.

Polyrhizodus carbonarius St. John and Worth.

Hay, O. P. 1902 A, 282.
Pennsylvanian; Illinois.

Polyrhizodus concavus (St. John and Worth.).

Hay, O. P. 1902 A, 282.
Eastman, C. R. 1917 A, 257, pl. viii, fig. 4.
Mississippian (St. Louis); Illinois.

Polyrhizodus dentatus Newb. and Worth.

Hay, O. P. 1902 A, 283.
Mississippian (Chester); Illinois.

Polyrhizodus digitatus (Leidy).

Hay, O. P. 1902 A, 283.
Mississippian (St. Louis); Missouri, Illinois.

Polyrhizodus excavatus (St. John and Worth.).

St. John and Worthen 1875 A, 392, pl. xiii, fig. 16 (Dactylodus).
Mississippian (Chester); Illinois.

Polyrhizodus grandis Eastman.

Eastman, C. R. 1917 A, 257, pl. viii, figs. 1, 2.
Mississippian (St. Louis); Illinois.

Polyrhizodus inflexus (Newb. and Worth.).

Hay, O. P. 1902 A, 283.
Mississippian (Chester); Illinois.

Polyrhizodus latus (Newb.).

Hay, O. P. 1902 A, 283.
Mississippian (St. Louis); Illinois.

Polyrhizodus littoni Newb. and Worth.

Hay, O. P. 1902 A, 283.
Branson, E. B. 1906 A, 1394.
Hussakof, L. 1908 A, 34.
Mississippian (St. Louis); Missouri, Indiana.

Polyrhizodus minimus (St. John and Worth.).

Hay, O. P. 1902 A, 283.
Mississippian (St. Louis); Illinois.

Polyrhizodus modestus Newb.

Hay, O. P. 1902 A, 283.
Claypole, E. W. 1903 A, 319, 321.
Eastman, C. R. 1907 B, 18.
Newberry, J. S. 1874 G, 94, 98.
Upper Devonian or Lower Mississippian; Ohio.

Polyrhizodus nanus St. John and Worth.

Hay, O. P. 1902 A, 283.
Mississippian (Keokuk); Iowa.

Polyrhizodus piasaënsis St. John and Worth.

Hay, O. P. 1902 A, 283.
Mississippian (Warsaw); Illinois.

Polyrhizodus ponticulus Newb. and Worth.

Hay, O. P. 1902 A, 283.
Mississippian (Chester); Illinois.

Polyrhizodus porosus Newb. and Worth.

Hay, O. P. 1902 A, 283.
Mississippian (Burlington); Iowa, Illinois.

Polyrhizodus princeps (Newb. and Worth.).

Hay, O. P. 1902 A, 283.
Eastman, C. R. 1917 A, 257.
Hussakof, L. 1908 A, 34.
Mississippian (St. Louis); Missouri, Illinois.

Polyrhizodus rectus (Newb.).

Hay, O. P. 1902 A, 283.
Hussakof, L. 1908 A, 34.
Mississippian (St. Louis); Illinois.

Polyrhizodus truncatus Newb. and Worth.

Hay, O. P. 1902 A, 283.
Mississippian (Burlington); Illinois.

Polyrhizodus williamsi St. John and Worth.

Hay, O. P. 1902 A, 283.
Mississippian (Keokuk); Missouri, Iowa.

PERIPRISTIDÆ Eastman.

Eastman, C. R. 1902 A, 389.
Jordan, D. S. 1923 A, 94.
Zittel and Koken 1911 A, 63.

PERIPRISTIS St. John. Type *Ctenoptychius semicircularis* Newb. and Worth.

Hay, O. P. 1902 A, 281 (*Ctenoptychius*, in part).
Barkas, W. J. 1874 D, 547.
Eastman, C. R. 1902 A, 388, 389.
1903 B, 176, 178.
Jordan, D. S. 1919 B, 359 (Syn. of Ctenoptychius).
1923 A, 94 (Not syn. of Ctenoptychius).
Zittel and Woodward 1902 A, 39.

Peripristis semicircularis (Newb. and Worth.).

Hay, O. P. 1902 A, 282 (Ctenoptychius).
Eastman, C. R. 1902 A, 289, fig. 1.
Eastman, C. R. 1903 B, 178, pl. ii, figs. 5-7; pl. iii, fig. 25, text-figs. 7, 8.
Etheridge, R. 1875 A, 244 (Ctenoptychius).
Hayden, F. V. 1872 A, 127.
Martin, H. T. 1913 A, 185 (Ctenoptychius).
Meek, F. B. 1869 A, 3.
1872 A, 86, 89, 96, 100, 102, 127.
Merrill, G. P. 1907 A, 15.
Smith, G. L. 1915 A, 282.
Stevenson, J. J. 1878 A, 240 (Ctenoptychius).
Woodruff, E. G. 1906 A, 290, pl. lxviii, fig. 7.
Missourian (Atchison); Nebraska: Pennsylvanian; Ohio, Indiana: Mississippian (Chester); Kentucky: Permian; Kansas; Iowa.

PSAMMODONTIDÆ Koninck

Hay, O. P. 1902 A, 284.
Abel, O. 1919 A, 135.
Arldt, T. 1907 D, 677.
Bridge, T. W. 1904 A, 446.
Cope, E. D. 1891 N, 17.
Dollo, L. 1889 F, 341.
Goodrich, E. S. 1909 A, 167.
Gregory, W. K. 1907 D, 446.
Hay, O. P. 1901 B, 66.
Hoernes, R. 1886 A, 543 (Psammodontes).
Jordan, D. S. 1905 A, i, 558.
Jordan, D. S. 1907 B, 215, 758, 759.
1923 A, 93.
Pompeckj, J. F. 1913 A, 1128.
Schlosser, M. 1917 A, 133 ("psammotontiden").
Trouessart, E. L. 1906 A, 213 ("psammodontes").
Woodward, A. S. 1919 B, 380.
1921 B, 34.
Zittel and Koken 1911 A, 61.
Zittel and Schlosser 1923 A, 66.
Zittel and Woodward 1902 A, 37.

PSAMMODUS Agassiz. Type *P. rugosus* Agassiz.

Hay, O. P. 1902 A, 284.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 548.
Böklen, H. 1887 A, 76.
Briquel, P. 1898 A, 16.
Bronn, H. G. 1848 B, 1048.
1849 A, 647.
Dean, B. 1909 C, 249.
Eastman, C. R. 1903 B, 170.
1917 A, 258.
Egerton, P. G. 1853 C, 282.
Etheridge, R. 1877 A, 308, pl. xiii, figs. 7-9.
Giebel, C. G. 1855 A, 115.
Hay, O. P. 1901 B, 66.
Heilprin, A. 1887 A, 300.
Hoernes, R. 1886 A, 543.
Jaekel, O. 1911 A, 54, fig. 44.
Jordan, D. S. 1905 A, i, 558; ii, 588.
1907 B, 215, 216.
1923 A, 93.
Mantell, G. A. 1844 A, 617.
Stephan, P. 1900 A, 409.
Woodward, A. S. 1921 B, 34.
1924 A, 110.
Zittel and Koken 1911 A, 61.
Zittel and Woodward 1902 A, 37.

Psammodus angularis Newb. and Worth.
Hay, O. P. 1902 A, 284.
Brongniart, C. 1888 C, 47 (P. porosus).
Hussakof and Bryant 1919 A, 149.
Mississippian (Chester); Illinois.

Psammodus antiquus Newb.
Hay, O. P. 1902 A, 284.
Claypole, E. W. 1903 A, 318.
Eastman, C. R. 1908 A, 276 (This genus?).
1907 B, 13 (This genus?).
Stauffer, C. R. 1909 A, 170.
Middle Devonian (Columbus); Ohio.

Psammodus cælatus St. John and Worth.
Hay, O. P. 1902 A, 284.
Mississippian (St. Louis); Iowa, Missouri.

Psammodus crassidens St. John and Worth.
Hay, O. P. 1902 A, 284.
Mississippian (St. Louis); Illinois, Iowa.

Psammodus glyptus St. John and Worth.
Hay, O. P. 1902 A, 284.
Branson, E. B. 1906 A, 1394.
Eastman, C. R. 1917 A, 258.
Hussakof, L. 1908 A, 34 (This species?).
Van Tuyl, F. M. 1925 A, 141.
Mississippian (Burlington); Illinois: (St. Louis); Indiana.

Psammodus grandis St. John and Worth.
Hay, O. P. 1902 A, 284.
Mississippian (Keokuk); Iowa.

Psammodus lovianus St. John and Worth.
Hay, O. P. 1902 A, 284.
Mississippian (Burlington); Iowa, Illinois.

Psammodus plenus St. John and Worth.
Hay, O. P. 1902 A, 284.
Eastman, C. R. 1917 A, 258, pl. vii, fig. 8.
Newberry, J. S. 1889 A, 210, pl. xix, figs. 7, 8 (P. glyptus *errore*).
Mississippian (St. Louis); Missouri, Illinois, Michigan.

Psammodus reticulatus Newb. and Worth.
Hay, O. P. 1902 A, 284.
Mississippian (Chester); Illinois.

Psammodus springeri St. John and Worth.
Hay, O. P. 1902 A, 285.
Eastman, C. R. 1917 A, 258.
Mississippian (Burlington); Iowa, Illinois.

Psammodus tumidus St. John and Worth.
Hay, O. P. 1902 A, 285.
Mississippian (Burlington); Iowa, Illinois.

Psammodus turgidus St. John and Worth.
Hay, O. P. 1902 A, 285.
Mississippian (Burlington-Keokuk division beds); Iowa.

Psammodus sp. indet.
Hay, O. P. 1902 A, 285.
Bell, W. A. 1913 A, 343 (Rhizodus).
Pennsylvanian (Joggins); Nova Scotia.
Lambe, L. M. 1904 C, 41.
Pennsylvanian (Joggins); Nova Scotia.

MAZODUS Newb. Type *M. kepleri* Newb.

Hay, O. P. 1902 A, 285.
Eastman, C. R. 1903 B, 219.
Moodie, R. L. 1920 C, 48, pl. i, fig. C.
1926 A, 67.
Rogers, A. F. 1924 A, 554, pl. xxvii, fig. 2.

Mazodus kepleri Newb.
Hay, O. P. 1902 A, 285.
Hussakof, L. 1908 A, 31.
Moodie, R. L. 1926 A, 79, 81, 93, pl. ix.
Mississippian (Waverly); Ohio.

ARCHÆOBATIS Newb. Type *A. gigas* Newb.

Hay, O. P. 1902 A, 285.
Dean, B. 1909 C, 258, pl. xxxv.
Eastman, C. R. 1903 B, 170.
Hay, O. P. 1901 B, 66.
Zittel and Koken 1911 A, 61.
Zittel and Woodward 1902 A, 37.

Archæobatis gigas Newb.
Hay, O. P. 1902 A, 285.
Branson, E. B. 1906 A, 1394.
Dean, B. 1909 C, 258.
Eastman, C. R. 1917 A, 258 (To Psammodus?).
Hussakof, L. 1908 A, 29.
Jordan, D. S. 1905 A, i, 559.
1907 B, 216.
Pompeckj, J. F. 1913 A, 1128.
Mississippian (St. Louis); Indiana.

COPODONTIDÆ Woodward.

Woodward, A. S. 1921 B, 35.

COPODUS Agassiz. Type *Psammodus cornutus* Agassiz.

Agassiz, L. 1862, in Morris and Roberts. Quart. Jour. Geol. Soc., xviii, 100.
Hay, O. P. 1902 A, 285.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 545.
Eastman, C. R. 1903 B, 170.
Jordan, D. S. 1907 B, 216.
1919 B, 320.
1923 A, 93.
Woodward, A. S. 1921 B, 34.
1924 A, 110.
Zittel and Woodward 1902 A, 37.

Copodus marginatus (Newb.).
Hay, O. P. 1902 A, 285.
Branson, E. B. 1906 A, 1394.
Hussakof, L. 1908 A, 29.
Mississippian (St. Louis); Indiana.

Copodus pusillus St. John and Worth.
Hay, O. P. 1902 A, 285.
Mississippian (Chester); Illinois.

Copodus vanhornii St. John and Worth.
Hay, O. P. 1902 A, 285.
Mississippian (St. Louis); Missouri, Illinois.

ACMONIODUS Hussakof and Bryant. Type *A. clarkei* Hussakof and Bryant.

Hussakof and Bryant 1919 A, 151.
Woodward, A. S. 1921 B, 36.

Acmoniodus clarkei Hussakof and Bryant:
Hussakof and Bryant 1919 A, 13, 151, 308, pl. lv, fig. 3; text-fig. 53.
Upper Devonian (Lower Genesee); New York.

Superfamily HYBODONTOIDÆ, new form.

Hay, O. P. 1902 A, 285 (Heterodontoidea).
Agassiz, L. 1844 D, 142 ("cestracionts").
Bronn, H. G. 1849 A, 830, seq. (Cestraciontes).
Cope, E. D. 1891 N, 17 (Cestraciontidæ).
Duméril, A. 1856 A, 132 ("cestraciontes").
Eastman, C. R. 1902 F, 267 ("cestracionts").
Fitzinger, L. J. 1873 A, 55 (Cestraciontes).
Gill, T. 1882 A, 967 (Proarthri or Acrodonta).
1885 A, lxiv (Proarthri).
Goodrich, E. S. 1909 A, 145 (Heterodonti).
Gregory, W. K. 1907 A, 446 (Prosarthri).
Jaekel, O. 1911 A, 57 (Cestracionti).
Jordan, D. S. 1905 A, i, 526; ii, 562 (Cestraciontes).
1907 B, 187, 758 (Cestraciontes).
Krivetski, A. 1917 A, 19 (Cestracion).
Pompeckj, J. F. 1913 A, 1124 (Heterodonti).
Regan, C. T. 1906 A, 723, 746 (Squaloidei).
Ridewood, W. G. 1921 A, 313 (Squaloidei).

COCHLIODONTIDÆ Owen.

Hay, O. P. 1902 A, 286.
Abel, O. 1919 A, 133.
Arldt, T. 1907 D, 646.
1923 A, 487 ("cochliodontiden").
Bridge, T. W. 1904 A, 445, 736.
Cope, E. D. 1891 N, 17.
Dean, B. 1906 B, 136 ("cochliodonts").
Dollo, L. 1889 F, 341.
1906 B, 135 ("cochliodontes").
1907 B, 101 ("cochliodontes").
Eastman, C. R. 1903 D, 285 ("cochliodonts").
Goodrich, E. S. 1909 A, 146.

Gregory, W. K. 1907 D, 446.
Hay, O. P. 1901 B, 66, 70.
Jaekel, O. 1892 B, 158 ("cochliodontiden").
1928 A, 43 ("cochliodonten").
Jordan, D. S. 1905 A, i, 531; ii, 564.
1907 B, 758.
1923 A, 94.
Koken, E. 1904 A, 305 ("cochliodontiden").
Krause, F. G. 1901 A, 120 ("cochliodonten").
Pompeckj, J. F. 1913 A, 1128.
Regan, C. T. 1906 A, 723, 747, 749.
Schlosser, M. 1917 A, 133, 146 ("cochliodontiden").
Stromer, E. 1912 A, 22.
Woodward, A. S. 1904 C, 188.
1911 C, 46 ("cochliodonts").
1919 B, 380.
1921 B, 36.
1924 A, 109, 110.
Zittel and Koken 1911 A, 59.
Zittel and Schlosser 1923 A, 64.
Zittel and Woodward 1902 A, 35.

HELODUS Agassiz. Type *H. simplex* Agassiz.

Hay, O. P. 1902 A, 286.
Agassiz, L. 1844 C, 267.
Barkas, W. J. 1874 D, 546.
Bronn, H. G. 1848 A, 583.
Coulon, L. 1903 A, 114.
Eastman, C. R. 1900 F, 581.
1903 B, 203.
1917 A, 259.
Giebel, C. G. 1855 A, 115.
Hay, O. P. 1901 B, 66.
Heilprin, A. 1887 A, 300.
Hoernes, R. 1886 A, 543.
Jordan, D. S. 1923 A, 94.
Owen, R. 1845 B, 61.
Savage, T. E. 1902 A, 257.
Stevenson, J. J. 1907 A, 168.
Woodward, A. S. 1921 B, 36.
1924 A, 109.
1924 B, 341.

Helodus angulatus Newb. and Worth.

Hay, O. P. 1902 A, 286.
Mississippian (Burlington); Illinois.

Helodus biformis Newb. and Worth.

Hay, O. P. 1902 A, 286.
Worthen, A. H. 1866 A, 115.
Mississippian (Kinderhook); Iowa.

Helodus carbonarius Newb. and Worth.

Hay, O. P. 1902 A, 286.
Pennsylvanian (Coal-measures); Illinois.

Helodus clivulus Branson.

Branson, E. B. 1914 A, 67, pl. iv, figs. 1, 2, 5, 6.
Upper Devonian (Craghead); Missouri.

Helodus comptus Eastman.

Eastman, C. R. 1909 A, 488.
1908 A, 112 (name only).
Pennsylvanian (Waverly); Pennsylvania.

Helodus coniculus Newb. and Worth.

Hay, O. P. 1902 A, 286.
Branson, E. B. 1906 A, 1382, pl. xli, figs. 5-7.
Eastman, C. R. 1903 B, 204.
Newberry, J. S. 1874 G, 90, 98.
Mississippian (Salem); Indiana: (Berea); Pennsylvania: (Burlington); Iowa: (Keokuk); Illinois.

Helodus consolidatus Newb. and Worth.

Hay, O. P. 1902 A, 286.
Mississippian (Keokuk); Missouri, Illinois.

Helodus crenulatus Newb. and Worth.

Hay, O. P. 1902 A, 286.
Mississippian (Keokuk); Illinois.

Helodus dens-humani Newb. and Worth.

Hay, O. P. 1902 A, 286.
Mississippian (Keokuk); Illinois.

Helodus denticulatus Newb. and Worth.

Hay, O. P. 1902 A, 286.
Mississippian (Keokuk); Illinois.

Helodus devonicus Branson.

Branson, E. B. 1914 A, 66, pl. iv, figs. 19, 20.
Upper Devonian (Craghead); Missouri.

Helodus elegantulus Branson.

Branson, E. B. 1906 A, 1383, pl. xlii, figs. 27-29.
Mississippian (Salem); Indiana.

Helodus elytra Newb. and Worth.

Hay, O. P. 1902 A, 286.
Mississippian (Keokuk); Illinois.

Helodus gibberulus Agassiz.

Hay, O. P. 1902 A, 286.
Eastman, C. R. 1902 B, 71.
1907 B, 20.
1908 A, 112, 287.
1909 A, 489.
Lambe, L. M. 1913 D, 19.
Upper Devonian (Chemung); Pennsylvania.

Helodus gibbus Leidy.

Hay, O. P. 1902 A, 286.
Mississippian (Warsaw); Illinois.

Helodus incipiens Branson.

Branson, E. B. 1914 A, 67, pl. iv, figs. 11-16.
Upper Devonian (Craghead); Missouri.

Helodus incisus Eastman.

Eastman, C. R. 1903 B, 204, pl. v, fig. 54.
Branson, E. B. 1906 A, 1382, pl. xli, figs. 10-12.
Mississippian (Salem); Indiana.

Helodus lævis Newb.

Hay, O. P. 1902 A, 286.
Branson, E. B. 1906 A, 1381, pl. xli, figs. 16-22.
Mississippian (Salem); Indiana.

Helodus limax Newb. and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Burlington); Iowa.

Helodus minutus Branson.

Branson, E. B. 1906 A, 1384, pl. xlii, figs. 32-34 (This genus?).
Mississippian (Salem); Indiana.

Helodus ornatus Branson.

Branson, E. B. 1906 A, 1383, pl. xlii, figs. 38-40.
Mississippian (Salem); Indiana.

Helodus politus Newb. and Worth.

Hay, O. P. 1902 A, 287.
Branson, E. B. 1916 A, 643.
Mississippian (Keokuk); Illinois.

Helodus robustus Branson.

Branson, E. B. 1906 A, 1382, pl. xlii, figs. 22-24.
Mississippian (Salem); Indiana.

Helodus rowleyi Branson.

Branson, E. B. 1914 A, 67, pl. iv, figs. 11-16.
Upper Devonian (Craghead); Missouri.

Helodus rugosus Newb. and Worth.

Hay, O. P. 1902 A, 287.
Branson, E. B. 1916 A, 643, pl. ii, fig. 10.
Eastman, C. R. 1903 B, 182, pl. ii, fig. 14.
Hussakof and Bryant 1919 A, 149.
Pennsylvanian (Atchison); Nebraska: (Embar); Wyoming; Pennsylvania.

Helodus subpolitus Branson.

Branson, E. B. 1916 A, 642, pl. i, figs. 6-16.
Pennsylvanian (Embar); Wyoming.

Helodus subtuberatus Lambe.

Lambe, L. M. 1912 B, 347.
Lambe, L. M. 1913 D, 20, pl. ii.
Upper Devonian; Alberta.

Helodus sulcatus Newb. and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Keokuk); Illinois.

Helodus undulatus Newb. and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Keokuk); Illinois.

Helodus wortheni Hay.

Hay, O. P. 1902 A, 287.
Mississippian (Burlington); Illinois.

Helodus sp. indet.

Branson, E. B. 1906 A, 1383.
Mississippian (Salem); Indiana.
Van Tuyl, F. M. 1925 A, 141.
Mississippian (Burlington); Iowa.

CRASSIDONTA BRANSON. Type *C. stuckenbergi* Branson.

Branson, E. B. 1916 A, 643.

Crassidonta stuckenbergi Branson.

Branson, E. B. 1916 A, 643, pl. 1, figs. 17-27.
Pennsylvanian (Embar); Wyoming.

VENUSTODUS St. John and Worth. Type *Chomatodus venustus* Leidy.

Hay, O. P. 1902 A, 287.
Eastman, C. R. 1903 B, 203.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 94.

Venustodus argutus St. John and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Chester); Illinois.

Venustodus robustus St. John and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Burlington); Iowa.

Venustodus tenuicristatus St. John and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Keokuk); Illinois, Iowa, Missouri.

Venustodus variabilis St. John and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Burlington); Illinois, Iowa.

Venustodus venustus (Leidy).

Hay, O. P. 1902 A, 287.
Mississippian (St. Louis); Illinois, Missouri.

XENODUS S. A. Miller. Type *Goniodus hertzeri* Newb.

Hay, O. P. 1902 A, 287.
Jordan, D. S. 1923 A, 94

Xenodus hertzeri (Newb.).

Hay, O. P. 1902 A, 287.

Claypole, E. W. 1896 B, 353 (Goniodus).
1903 A, 319, 346 (Goniodus).
Eastman, C. R. 1907 B, 18 (X. herzeri).
1908 A, 283 (X. herzeri).
Hussakof, L. 1908 A, 37.
Upper Devonian (Huron); Ohio.

PERIPLECTRODUS St. John and Worth. Type *P. warreni* St. John and Worth.

Hay, O. P. 1902 A, 287.
Davis, J. W. 1884 A, 632.
Eastman, C. R. 1902 B, 57.
1902 H, 150.

Eastman, C. R. 1903 D, 285.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1923 A, 94.

Periplectrodus compressus St. John and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (St. Louis); Illinois.

Periplectrodus expansus St. John and Worth.

Hay, O. P. 1902 A, 287.
Mississippian (Chester); Illinois.

Periplectrodus warreni St. John and Worth.

Hay, O. P. 1902 A, 287.
Fuchs, T. 1900 A, 8, fig. 3.
Mississippian (Burlington); Illinois.

PSEPHODUS Agassiz. Type *Cochliodus magnus* Portlock.

Agassiz, L. 1862, in Morris and Roberts, Quart. Jour. Geol., xviii, 101.
Hay, O. P. 1902 A, 288.
Abel, O. 1912 F, 488.
1919 A, 136.
Arldt, T. 1923 A, 487 (Psephodus, Tæniodus).
Barkas, W. J. 1874 D, 548.
Branson, E. B. 1905 A, 20.
Coulon, L. 1903 A, 114.
Eastman, C. R. 1917 A, 259.
Jaekel, O. 1911 A, 56, fig. 51.
Jordan, D. S. 1919 B, 320.
1923 A, 94.
Leriche, M. 1908 B, 272.
Pompeckj, J. F. 1913 A, 1128.
St. John and Worthen 1883 A, 59, 63 (Psephodus); 75 (Tæniodus).
Woodward, A. S. 1898 B, 42, fig. 33.
Zittel and Koken 1911 A, 60.
Zittel and Schlosser 1923 A, 65, fig. 106.
Zittel and Woodward 1902 A, 36.

Psephodus acutus Branson.

Branson, E. B. 1905 A, 24, pl. i, fig. 1.
Pennsylvanian; Illinois.

Psephodus carbonarius Branson.

Branson, E. B. 1905 A, 25, pl. i, fig. 7.
Pennsylvanian; Indiana.

Psephodus crenulatus (Newb. and Worth.).

Hay, O. P. 1902 A, 288.
Branson, E. B. 1905 A, 22.
Newberry and Worthen 1866 A, 94, pl. viii. figs. 12, 12a (Aspidodus convolutus).
Mississippian (Chester); Illinois, Kentucky, Missouri, Indiana.

Psephodus latus St. John and Worth.

Hay, O. P. 1902 A, 288.
Branson, E. B. 1906 A, 1387, pl. xli, fig. 23 (This species?).
Mississippian (Salem); Indiana: (St. Louis); Illinois and Missouri.

Psephodus legrandensis Branson.

Branson, E. B. 1905 A, 22, 24, pl. i, fig. 2.
Eastman, C. R. 1917 A, 259, pl. xviii, fig. 2.
Leriche, M. 1908 B, 273 ("Deltodus").
Mississippian (Kinderhook); Iowa.

Psephodus lunulatus St. John and Worth.

Hay, O. P. 1902 A, 288.
Mississippian (Chester); Illinois.

Psephodus obliquus St. John and Worth.

Hay, O. P. 1902 A, 288.
Branson, E. B. 1905 A, 22.
Mississippian (Kinderhook); Iowa.

Psephodus placenta (Newb. and Worth.).

Hay, O. P. 1902 A, 288.
Worthen, A. H. 1866 A, 115 (Helodus).
Mississippian (Kinderhook); Iowa.

Psephodus politus Newb.

Hay, O. P. 1902 A, 288.
Mississippian (Burlington); Illinois.

Psephodus regularis (St. John and Worth.).

Hay, O. P. 1902 A, 288.
Branson, E. B. 1906 A, 1388, pl. xli, fig. 32.
Mississippian (Salem); Indiana.

Psephodus? reticulatus St. John and Worth.

Hay, O. P. 1902 A, 288.
Eastman, C. R. 1903 B, 204.
Mississippian (Kinderhook); Iowa.

Psephodus? symmetricus St. John and Worth.

Hay, O. P. 1902 A, 288.
Mississippian (Kinderhook); Iowa.

Psephodus sp. indet.

Branson, E. B. 1906 A, 138.
1914 A, 68, pl. iv, fig. 18.
Mississippian (Salem); Indiana; Upper Devonian; Missouri.

SANDALODUS Newb. and Worth. Type *S. angustus* St. John and Worth.

Hay, O. P. 1902 A, 288.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 548.
Branson, E. B. 1905 A, 25.
1916 A, 652.
Dean, B. 1906 B, 139.
Eastman, C. R. 1902 B, 57.
1903 B, 196.
1917 A, 260.
Fuchs, T. 1900 A, 7.

Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 342.
1923 A, 94.
St. John, O. 1902 A, 659.
Zittel and Koken 1911 A, 60.
Zittel and Schlosser 1923 A, 65.
Zittel and Woodward 1902 A, 36.

Sandalodus alatus (Newb. and Worth.).

Hay, O. P. 1902 A, 292 (Deltodus).
Branson, E. B. 1905 A, 30, pl. i, figs. 3-5.
Leriche, M. 1908 B, 277 (Deltodus).
Mississippian (Keokuk and Burlington); Iowa, Illinois.

Sandalodus angustus Newb. and Worth.

Hay, O. P. 1902 A, 288.
Mississippian (Keokuk); Illinois.

Sandalodus carbonarius Newb. and Worth.

Newberry and Worthen 1866 A, 104, pl. x, figs. 4, 5.
Hay, O. P. 1902 A, 289 (Orthopleurodus angularis, in part).
Eastman, C. R. 1903 B, 181 (From Orthopleurodus).
Worthen, A. H. 1866 A, 61.
Pennsylvanian (Missourian); Kansas, Nebraska, Iowa, Missouri: (Coal measures); Illinois, Indiana.

Sandalodus convolutus Branson.

Branson, E. B. 1906 A, 1386, pl. xlii, figs. 42-45.
Mississippian (Salem); Indiana.

Sandalodus ellipticus Newb.

Hay, O. P. 1902 A, 289.
Mississippian (Kinderhook); Iowa.

Sandalodus emarginatus Branson.

Branson, E. B. 1905 A, 29, pl. ii, figs. 1-3.
Mississippian (Keokuk); Iowa.

Sandalodus lævissimus Newb. and Worth.

Hay, O. P. 1902 A, 289 (S. crassus; S. rhomboideus).
Branson, E. B. 1906 A, 1385.
Eastman, C. R. 1900 F, 582, fig. 1.
Eastman, C. R. 1903 B, 196, fig. 11.
Hussakof, L. 1908 A, 36 (S. crassus).
Newberry and Worthen 1866 A, 104, pl. x, figs. 6-8.
St. John and Worthen 1883 A, 186, pl. xii, figs. 8, 9 (and 5?).
Savage, T. E. 1902 A, 256, 262.
Mississippian (Keokuk); Iowa, Illinois, and Missouri: (Salem); Indiana.

Sandalodus latidens Branson.

Branson, E. B. 1905 A, 31, pl. i, fig. 11.
Mississippian (Keokuk); Iowa.

Sandalodus? minor (Newb. and Worth.).

Hay, O. P. 1902 A, 289.
Barkas, W. J. 1874 D, 548 (Trigonodus minor).
Branson, E. B. 1906 A, 1394.
Mississippian (Keokuk); Illinois: (Salem); Indiana.

Sandalodus occidentalis (Leidy).

Hay, O. P. 1902 A, 292 (Deltodus complanatus, D. occidentalis).
Barkas, W. J. 1874 D, 548 (Trigonodus major).
Branson, E. B. 1905 A, 26, 28, pl. i, figs. 8, 9.
1906 A, 1384, pl. xli, fig. 33.
Eastman, C. R. 1903 B, 198 (Sandalodus complanatus); 200, pl. iv, fig. 38; pl. v, fig. 53 (Deltodus occidentalis).
1917 A, 260, pl. viii, fig. 3 (Deltodus).
Savage, T. E. 1902 A, 256, 262 (Deltodus occidentalis?).
Mississippian (Keokuk, Kinderhook, Burlington, St. Louis); Illinois, Missouri: (Salem); Indiana.

Sandalodus parvulus Newb. and Worth.

Hay, O. P. 1902 A, 289.
Mississippian (St. Louis); Illinois, Missouri, Iowa.

Sandalodus porcatus Branson.

Branson, E. B. 1905 A, 30, pl. i, fig. 14.
Branson, E. B. 1906 A, 1386, pl. xli, fig. 26.
Mississippian (St. Louis); Indiana.

Sandalodus sp. indet.

Hay, O. P. 1902 A, 289. Mississippian (Warsaw); Illinois.

ORTHOPLEURODUS St. John and Worth. Type *O. angularis* (Newb. and Worth.).

Hay, O. P. 1902 A, 289.
Eastman, C. R. 1903 B, 181 (Deltodus).
Hay, O. P. 1901 B, 66.
Hayden, F. V. 1872 A, 132 (Xystrodus).
Jordan, D. S. 1919 B, 405 (Syn. of Sandalodus).
1919 D, 405 (Type said to be *O. convexus*).
1923 A, 94.
It is to be noted that *O. angularis*, the type of this genus, is referred by Eastman to *Deltodus*. If this is accepted, the other species follow.

Orthopleurodus angularis (Newb. and Worth.).

Hay, O. P. 1902 A, 289.
Eastman, C. R. 1903 B, 181, pl. ii, fig. 19 (Deltodus).
Hayden, F. V. 1872 A, 127 (Xystrodus occidentalis).
Meek, F. B. 1869 A, 3 (Xystrodus? Name only).
1872 A, 101-127 (Deltodus?); 112-127 (Xystrodus?).
Newberry and Worthen 1866 A, 104, pl. x, figs. 4, 5 (Sandalodus carbonarius).
Woodruff, E. G. 1906 A, 290 (Deltodus).
Worthen, A. H. 1866 A, 61 (Cochliodus).
Pennsylvanian (Coal-measures); Indiana, Illinois, Iowa, Missouri, Kansas, Nebraska.

Orthopleurodus convexus St. John and Worth.

Hay, O. P. 1902 A, 289.
Pennsylvanian (Coal-measures); West Virginia.

Orthopleurodus novo-mexicanus St. John and Worth.

Hay, O. P. 1902 A, 289.
Cockerell, T. D. A. 1908 C, 161.
Mississippian; New Mexico.

PLATYODUS Newb. Type *P. lineatus* Newb.

Hay, O. P. 1902 A, 290.
Jordan, D. S. 1923 A, 94.

Platyodus lineatus Newb.

Hay, O. P. 1902 A, 290.
Hussakof, L. 1908 A, 33.
Mississippian (Waverly); Kentucky.

VATICINODUS St. John and Worth. Type *V. vetustus* St. John and Worth.

Hay, O. P. 1902 A, 290.
Arldt, T. 1923 A, 487.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 405 (Syn. of Sandalodus).
1923 A, 94.

Vaticinocus? carbonarius St. John and Worth.

Hay, O. P. 1902 A, 290.
Pennsylvanian (Lower); Illinois.

Vaticinodus discrepans St. John and Worth.

Hay, O. P. 1902 A, 290.
Mississippian (Burlington); Iowa.

Vaticinodus? lepis St. John and Worth.

Hay, O. P. 1902 A, 290.
Pennsylvanian (Upper Coal-measures); Illinois.

Vaticinodus? similis St. John and Worth.

Hay, O. P. 1902 A, 290.
Mississippian (Chester); Illinois.

Vaticinodus? simplex St. John and Worth.

Hay, O. P. 1902 A, 290.
Mississippian (St. Louis); Illinois, Missouri, Iowa.

Vaticinodus vetustus St. John and Worth.

Hay, O. P. 1902 A, 290.
Mississippian (Kinderhook); Iowa.

PLATYXYSTRODUS Hay. Type *Cochliodus striatus* M'Coy.

Hay, O. P. 1902 A, 290.
Arldt, T. 1923 A, 487 (Xystrodus).
Eastman, C. R. 1903 B, 180.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1920 C, 480.
1923 A, 94.

Platyxystrodus bellulus (St. John and Worth.).

Hay, O. P. 1902 A, 290.
Pennsylvanian (Lower Coal-measures); Illinois.

Platyxystrodus imitatus (St. John and Worth.).

Hay, O. P. 1902 A, 290.
Mississippian (St. Louis); Missouri, Illinois, Iowa.

Platyxystrodus inconditus (St. John and Worth.).

Hay, O. P. 1902 A, 290.
Mississippian (Keokuk); Illinois, Iowa.

Platyxystrodus occidentalis (St. John).

St. John, O. 1870 A, 436 (Xystrodus).
Hay, O. P. 1902 A, 289 (Orthopleurodus angularis, in part).
Eastman, C. R. 1903 B, 181 (This genus?).
St. John, O. 1872 A, 244, pl. iv, fig. 18 (Xystrodus?).
Pennsylvanian (Missourian); Nebraska.

Platyxystrodus simplex (St. John and Worth.).

Hay, O. P. 1902 A, 290.
Mississippian (Burlington); Iowa, Illinois.

Platyxystrodus verus (St. John and Worth.).

Hay, O. P. 1902 A, 290.
Mississippian (Chester); Illinois.

ICANODUS S. A. Miller. Type *Tomodus convexus* St. John and Worth.

Hay, O. P. 1902 A, 291.
Barkas, W. J. 1874 D, 548 (Tomodus).
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1923 A, 94.

Icanodus limitaris (St. John and Worth.).

Hay, O. P. 1902 A, 291.
Mississippian (Burlington); Iowa.

STENOPTERODUS St. John and Worth. Type *S. planus* St. John and Worth.

Hay, O. P. 1902 A, 291.
1901 B, 67.
Jordan, D. S. 1919 B, 405 (Syn. of Deltodus).
1923 A, 94.

Stenopterodus elongatus St. John and Worth.

Hay, O. P. 1902 A, 291.
Mississippian (Warsaw); Illinois.

Stenopterodus planus St. John and Worth.

Hay, O. P. 1902 A, 291.
Mississippian (Burlington); Iowa, Iilinois.

Stenopterodus sp. indet.

Hay, O. P. 1902 A, 291.
Mississippian (Keokuk); Illinois.

DELTODOPSIS St. John and Worth. Type *D. angustus* (Newb. and Worth.).

Hay, O. P. 1902 A, 291.
Arldt, T. 1923 A, 487.
Fuchs, T. 1900 A, 7.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 405.
1923 A, 94.

Deltodopsis affinis St. John and Worth.

Hay, O. P. 1902 A, 291.
Mississippian (Warsaw); Illinois.

Deltodopsis angustus (Newb. and Worth.).

Hay, O. P. 1902 A, 291.
Mississippian (Chester); Illinois.

Deltodopsis? bialveatus St. John and Worth.

Hay, O. P. 1902 A, 291.

Branson, E. B. 1906 A, 1391, pl. xli, figs. 8, 9.
Mississippian (Salem); Indiana: (Burlington, Keokuk); Iowa.

Deltodopsis? exornatus St. John and Worth.

Hay, O. P. 1902 A, 291.
Mississippian (Warsaw); Illinois.

Deltodopsis? inflexus St. John and Worth.

Hay, O. P. 1902 A, 291.
Mississippian (Keokuk); Illinois.

Deltodopsis sancti-ludovici St. John and Worth.

Hay, O. P. 1902 A, 291.
Branson, E. B. 1906 A, 1391.
Mississippian (St. Louis); Iowa, Illinois, Missouri.

DELTODUS Agassiz. Type *Pœcilodus sublævis* M'Coy.

Agassiz, L. 1862, in Morris and Roberts, Quart. Jour. Geol., xviii, 100.
Hay, O. P. 1902 A, 291.
Barkas, W. J. 1874 D, 546.
Branson, E. B. 1905 A, 25.
1906 A, 1394, pl. xlii, fig. 37 (This genus?).
1916 A, 652.
Coulon, L. 1903 A, 114.
Dean, B. 1906 B, 136 ("deltodonts").
Eastman, C. R. 1903 B, 196, 198.
1917 A, 261.
Fuchs, T. 1900 A, 7.
Jaekel, O. 1926 B, 43 ("deltodonten").
Hay, O. P. 1901 B, 66.
Hayden, F. V. 1872 A, 132.
Jordan, D. S. 1923 A, 94.
Leriche, M. 1908 B, 275.
Savage, T. E. 1902 A, 257.
Stevenson, J. J. 1907 A, 168.

Deltodus attenuatus Branson.

Branson, E. B. 1905 A, 33, pl. i, fig. 6.
Pennsylvanian; Missouri.

Deltodus cinctulus St. John and Worth.

Hay, O. P. 1902 A, 292.
Mississippian (Warsaw); Missouri, Illinois.

Deltodus cinctus Newb.

Hay, O. P. 1902 A, 292 (D. cinctus, D. parvus).

Branson, E. B. 1906 A, 1390, pl. xlii, fig. 41 (D. parvus a syn.).
Mississippian (Salem); Indiana: (St. Louis); Iowa: (St. Louis); Missouri.

Deltodus cingulatus Newb. and Worth.

Hay, O. P. 1902 A, 292.
Mississippian (Chester); Illinois.

Deltodus fasciatus Newb. and Worth.

Hay, O. P. 1902 A, 292.
Mississippian (Keokuk); Illinois: Warsaw?); Illinois: (St. Louis?); Iowa.

Deltodus grandis Newb.

Hay, O. P. 1902 A, 292.
Branson, E. B. 1905 A, 25.
Mississippian (Keokuk); Illinois.

Deltodus inornatus Newb.

Hay, O. P. 1902 A, 292.
Mississippian (Kinderhook); Iowa.

Deltodus intermedius St. John and Worth.

Hay, O. P. 1902 A, 292.
Branson, E. B. 1906 A, 1384 (Sandalodus occidentalis).
Keyes, C. R. 1897 A, 322.
Mississippian (St. Louis); Iowa, Illinois.

Deltodus latior St. John and Worth.

Hay, O. P. 1902 A, 292.
Branson, E. B. 1906 A, 1389 (D. spatulatus).
Eastman, C. R. 1903 B, 200, pl. v, fig. 53 (var. of D. occidentalis).
Mississippian (Keokuk); Illinois, Iowa.

Deltodus littoni Newb. and Worth.

Hay, O. P. 1902 A, 292.
Hussakof, L. 1908 A, 30.
Mississippian (St. Louis); Missouri.

Deltodus mercurii Newb.

Hay, O. P. 1902 A, 292.
Branson, E. B. 1916 A, 648, pl. ii, figs. 27, 28; pl. v, figs. 1-11; pl. vi, figs. 1-6.
Cockerell, T. D. A. 1908 C, 161.
Hussakof, L. 1908 A, 31.
Pennsylvanian; New Mexico, Wyoming.

Deltodus obliquus (St. John and Worth.).

Hay, O. P. 1902 A, 292.
Mississippian (Chester); Illinois.

Deltodus planidens Cope.

Hay, O. P. 1902 A, 292.
Montgomery, T. H. 1904 A, 57 (Deltodes).
Pennsylvanian?; Texas.

Deltodus powellii St. John and Worth.

Hay, O. P. 1902 A, 292.
Pennsylvanian; Colorado.

Deltodus propinquus St. John and Worth.

Hay, O. P. 1902 A, 293.
Pennsylvanian; Illinois.

Deltodus spatulatus Newb. and Worth.

Hay, O. P. 1902 A, 291 (Deltodopsis convolutus?); 293 (D. spatulatus); 294 (Cochliodus costatus).
Branson, E. B. 1905 A, 26, 28, 31, pl. i, figs. 10-13.
1906 A, 1388, pl. xli, fig. 34 (Includes Cochliodus costatus and Deltodopsis convolutus).
Eastman, C. R. 1903 B, 198, pl. iv, figs. 41, 42; pl. v, fig. 55 (D. convolutus a syn.); 201 (Cochliodus costatus).
Fuchs, T. 1900 A, 8, fig. 2 (Deltodopsis convolutus).
Newberry and Worthen 1870 A, pl. iii, fig. 11.
Savage, T. E. 1902 A, 256, 262.
Van Tuyl, F. M. 1925 A, 141.
Mississippian (Kinderhook); Iowa: (Burlington); Illinois: (Salem); Indiana.

Deltodus trilobus St. John and Worth.

Hay, O. P. 1902 A, 293.
Branson, E. B. 1906 A, 1389, pl. xli, figs. 27, 28.
Mississippian (Kinderhook, Burlington); Illinois: Iowa (Salem); Indiana.

Deltodus undulatus Newb. and Worth.

Hay, O. P. 1902 A, 293.
Eastman, C. R. 1900 F, 582.
Mississippian (Keokuk); Iowa.

Deltodus sp. indet.

Branson, E. B. 1906 A, 1391, pl. xli, fig. 24.
Mississippian (Salem); Indiana.

CHITONODUS St. John and Worth. Type *C. springeri* St. John and Worth.

Hay, O. P. 1902 A, 293 (Chitinodus, *errore*).
Jordan, D. S. 1919 B, 405.
1919 D, 405 (Type said to be *Cochliodus latus*).
1920 C, 425 (Type said to be *C. springeri*).
1923 A, 94.
Zittel and Schlosser 1923 A, 65 (Chitinodus).

Chitonodus antiquus St. John and Worth.

Hay, O. P. 1902 A, 293 (Chitinodus).
Mississippian (Burlington); Iowa.

Chitonodus liratus St. John and Worth.

Hay, O. P. 1902 A, 293 (Chitinodus).
Mississippian (St. Louis); Illinois.

Chitonodus springeri St. John and Worth.

Hay, O. P. 1902 A, 293 (Chitinodus).
Mississippian (Burlington); Illinois, Iowa.

PŒCILODUS M'Coy. Type *P. jonesii* M'Coy.

Hay, O. P. 1902 A, 293.
Agassiz, L. 1844 C, 267.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 548 (Pæcilodus).
Bronn, H. G. 1848 B, 1022.
1849 A, 647.
Eastman, C. R. 1903 B, 202.
Egerton, P. G. 1853 C, 282.
Hay, O. P. 1901 B, 66.
Jordan, D. S. 1919 B, 266.
Jordan, D. S. 1923 A, 94.
Ridewood, W. G. 1896 A, 387.
Savage, T. E. 1902 A, 257.
Woodward, A. S. 1898 B, 42, fig. 33.
Zittel and Koken 1911 A, 60.

Pœcilodus carbonarius St. John and Worth.

Hay, O. P. 1902 A. 293.
Pennsylvanian; Illinois. Kansas.

Pœcilodus cestriensis St. John and Worth.

Hay, O. P. 1902 A, 293.
Mississippian (Chester); Illinois.

Pœcilodus convolutus Newb. and Worth.

Hay, O. P. 1902 A, 293.
Mississippian (Keokuk); Illinois, Iowa.

Pœcilodus rugosus (Newb and Worth.).

Hay, O. P. 1902 A, 293 (Chitinodus).
Eastman, C. R. 1903 B, 202.
Savage, T. E. 1902 A, 262.
Mississippian (Keokuk); Illinois, Iowa.

Pœcilodus tribulis (St. John and Worth.).

Hay, O. P. 1902 A, 293 (Chitinodus).
Eastman, C. R. 1903 B, 203.
Mississippian (Keokuk); Iowa, Illinois.

Pœcilodus varsoviensis St. John and Worth.

Hay, O. P. 1902 A, 294.
Mississippian (Warsaw); Illinois.

STREBLODUS Agassiz. Type *Cochliodus oblongus* M'Coy.

Agassiz, L. 1862, in Morris and Robert's, Quart. Jour. Geol. Soc., xviii, 101.
Eastman, C. R. 1903 B, 182.
Jordan, D. S. 1919 B, 320.
Woodward, A. S. 1889 D, 209.
Zittel and Schlosser 1923 A, 65.
Zittel and Woodward 1902 A, 36.

Streblodus angustus Eastman.

Eastman, C. R. 1903 B, 182, pl. ii, fig. 20, text-fig. 9.
Woodruff, E. G. 1906 A, 290.
Pennsylvania (Atchison); Nebraska.

COCHLIODUS Agassiz. Type *C. contortus* Agassiz.

Hay, O. P. 1902 A, 294.
Abel, O. 1912 F, 488.
Agassiz, L. 1844 C, 267.
Aichel, O. 1919 A, 242.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 545.
Böklen, H. 1887 A, 77.
Branson, E. B. 1905 A, 22.
Bronn, H. G. 1848 A, 317.
1849 A, 647.
Eastman, C. R. 1902 B, 57.
Fuchs, T. 1900 A, 7.
Giebel, C. G. 1855 A, 115.
Goodrich, E. S. 1909 A, 146.
Hay, O. P. 1901 B, 66.
Heilprin, A. 1887 A, 300.
Jaekel, O. 1911 A, 53.
1926 B, 43 ("cochliodonten").
Jordan, D. S. 1923 A, 94.
Leriche, M. 1908 B, 278.
Owen, R. 1845 B, 62, pl. xxii, fig. 1.
Peyer, B. 1920 A, 109.
Pompeckj, J. F. 1913 A, 1128, fig. 31.
Reynolds, S. H. 1897 A, 109.
Ridewood, W. G. 1896 A, 385, 387, figs. 11, 12.
Terra, P. 1911 A, 200, fig. 46.
Van de Wiele, C. 1902 A, 245 ("cochliodontidés").
Woodward, A. S. 1915 B, lxvi ("cochliodonts").
Zittel and Koken 1911 A, 59.
Zittel and Schlosser 1923 A, 65, fig. 105.
Zittel and Woodward 1902 A, 35.

Cochliodus latus Leidy.

Hay, O. P. 1902 A, 293 (Chitinodus).
Eastman, C. R. 1900 F, 582 (Helodus coxanus a syn.)
1902 B, 57.
Eastman, C. R. 1902 D, 659.
1903 B, 199, 205.
1909 A, 489.
Merrill, G. P. 1907 A, 11 (Helodus coxanus).
Van Tuyl, F. M. 1925 A, 150, 154 (C. nobilis).
Mississippian (Keokuk); Illinois, Iowa.

Cochliodus leidyi St. John and Worth.

Hay, O. P. 1902 A, 294.
Eastman, C. R. 1902 D, 658.
Mississippian (Chester); Illinois.

Cochliodus obliquus St. John and Worth.

Hay, O. P. 1902 A, 294.
Mississippian (St. Louis); Missouri.

Cochliodus sancti-ludovici (St. John and Worth.).

Hay, O. P. 1902 A, 293 (Pœcilodus).
Eastman, C. R. 1902 D, 658, 659.
St. John, O. 1902 A, 658, fig. 4.
Mississippian (St. Louis); Illinois, Iowa.

Cochliodus vanhornii St. John and Worth.

Hay, O. P. 1902 A, 294.
Mississippian (St. Louis); Illinois, Iowa, Missouri.

Cochliodus sp. indet.

Branson, E. B. 1906 A, 1394, pl. xlii, fig. 37 (Cochliodus or Deltodus).
Mississippian (Salem); Indiana.

DELTOPTYCHIUS Agassiz, L. Type *Cochliodus acutus* M'Coy.

Agassiz, L. 1862, in Morris and Roberts, Quart. Jour. Geol., xviii, 100.
Hay, O. P. 1902 A, 294.
Abel, O. 1912 F, 488.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 546.
Eastman, C. R. 1903 B, 196.
Hay, O. P. 1901 B, 67.
Jaekel, O. 1892 B, 157.
Jordan, D. S. 1919 B, 320.
1923 A, 94
Woodward, A. S. 1921 B, 37.
1924 A, 109.
Zittel and Koken 1911 A, 60.
Zittel and Schlosser 1923 A, 65.

Deltoptychius expansus St. John and Worth.

Hay, O. P. 1902 A, 294.
Mississippian (St. Louis); Illinois, Iowa, Missouri.

Deltoptychius nitidus (Leidy).

Hay, O. P. 1902 A, 294.
Mississippian (Chester); Illinois.

Deltoptychius primus St. John and Worth.

Hay, O. P. 1902 A, 294.
Mississippian (Burlington); Iowa.

Deltoptychius springeri (St. John and Worth.).

Hay, O. P. 1902 A, 293 (Pœcilodus).
Cockerell, T. D. A. 1908 C, 161 (Pœcilodus).
Eastman, C. R. 1903 B, 202 (To Deltoptychius).
Mississippian; New Mexico.

Deltoptychius varsoviensis St. John and Worth.

Hay, O. P. 1902 A, 294.
Mississippian (Warsaw); Illinois.

Deltoptychius wachsmuthi St. John and Worth.

Hay, O. P. 1902 A, 294.
Mississippian (Keokuk); Illinois, Iowa, Missouri.

Deltoptychius wortheni (St. John and Worth.).

Hay, O. P. 1902 A, 294 (Pœcilodus).
Eastman, C. R. 1903 B, 202 (To Deltoptychius).
Mississippian (Chester); Illinois.

HYBODONTIDÆ Owen.

Owen, R. 1846 E, 51.
Hay, O. P. 1902 A, 295 (Orodontidæ); 298 (Heterodontidæ).
Abel, O. 1912 F, 489, 565 (Cestracionidæ).
1919 A, 121 (Heterodontidæ).
Agassiz, L. 1844 D, 142 ("cestraciontes").
1874 A, 131 (Cestracion).
Allis, E. P. 1915 A, 577 (Cestracion).
Ameghino, F. 1906 A, 187 (Cestraciontidæ).
Arldt, T. 1907 D, 644 (Cestracionidæ); 659 (Hybodontidæ).
1923 A, 487 ("hybodontiden").
Beer, G. R. 1924 A, 17, figs. 1-7, 15 (Heterodontus).
1924 B, 39, figs. 1-21 (Heterodontus).
1924 C, 298, figs. 11, 12, 41 (Heterodontus).
1925 A, 270, figs. 2-6, 107, 109, 116 (Heterodontus).
Bonaparte, C. L. 1840 A, 46 (Cestraciontina).
Bridge, T. W. 1904 A, 444, 742 (Heterodontidæ).
Bronn, H. G. 1849 A, 830, seq. (Cestracionte).
Carus, V. 1875 A, 602 (Cestraciontidæ).
Chapman, F. 1918 A, 5 (Cestraciontidæ).
Cunningham, J. T. 1912 A, 246 (Heterodontidæ).
Daniel, J. F. 1914 A, 147, pls. viii, ix, figs. 1-4 (Heterodontus).
1915 A, 447, pls. i-viii (Heterodontus).
1916 A, 353 (Heterodontus).
Day, E. C. H. 1865 A, 565 ("cestracionts").
Dean, B. 1906 B, 155 ("cestracionts").
Deecke, W. 1913 A, 80 ("hybodontiden").
Dollo, L. 1889 F, 341 (Cestraciontidæ).
Dollo, L. 1904 C, 50 (Cestraciontidæ).
Duméril, A. 1856 A, 132 ("cestraciontes").
Eastman, C. R. 1902 B, 56 (Cestracion); 70 (Cestraciontidæ).
1902 F, 267 ("cestracionts").
Fowler, H. W. 1911 A, 26 (Heterodontidæ).
Fürbringer, K. 1903 A, 362 (Cestraciontidæ).
1904 B, 461 (Cestracion).
Gegenbaur, C. 1870 B, 450, pl. xvi, figs. 18-20 (Heterodontus).
1870 C, 402, fig. 18 (Heterodontus).
Gill, T. 1872 C, 23 (Heterodontidæ).
1885 A, lxiv (Heterodontidæ).
1905 A, 657 (Heterodontidæ).
Goodrich, E. S. 1909 A, 145 (Cestraciontidæ).
Gregory, W. K. 1907 D, 446 (Cestraciontidæ, Orodontidæ).
Hawkes, O. A. M. 1905 A, 81 (Heterodontidæ).
Hay, O. P. 1901 B, 67, 70 (Heterodontidæ); 67, 71 (Orodontidæ).
1909 C, 58 (Heterodontus).
Hoernes, R. 1886 A, 542 (Cestraciontidæ).
Huber, O. 1901 A, 609 (Cestraciontidæ).
Humphreys, J. 1908 A, 10 (Cestracion).
Jaekel, O. 1903 C, 389 ("orodontiden").
Jordan, D. S. 1905 A, i, 527 (Hybodontidæ); 528 (Orodontidæ); ii, 574 (Heterodontidæ).
1907 B, 184, 188, 758 (Heterodontidæ, Orodontidæ, Hybodontidæ).
1923 A, 95 (Orodontidæ, Heterodontidæ).
1925 B, 7 (Heterodontidæ).
Jordan and Evermann 1917 A, 95 (Heterodontus).

Jordan and Gilbert 1882 A, 32, 62 (Cestraciontidæ).
Kerr, J. G. 1908 A, 169 (Heterodontus).
Koken, E. 1904 A, 305 ("hybodontiden," Cestracionidæ).
1907 A, 272 ("cestraciontiden").
Leigh-Sharpe, W. H. 1926 A, 337 (Cestracionidæ).
Leunis and Ludwig 1883 A, 785 (Cestraciontidæ).
Luther, A. 1909 A, 3 (Heterodontidæ).
Miklouho-Maclay and Macleay 1879 A, 307 (Heterodontidæ); 320 (Heterodonti).
Mummery, J. H. 1917 A, 251 (Cestracion).
Osburn, R. C. 1907 A, 418 (Cestracion).
1907 B, 174 ("cestracion").
Owen, R. 1845 B, 32, pls. x-xiii ("cestracionts").
Pompeckj, J. F. 1913 A, 1123, 1126 (Hybodontidæ, Cestraciontidæ).
Rabinerson, A. 1925 A, 560, figs. 1, 2 (Cestracion).
Rauther, M. 1913 A, 1098 (Heterodontidæ).
Regan, C. T. 1906 A, 749, 750 (Cestraciontidæ, Hybodontidæ); 723 (Hybodontinæ).
1908 C, 493 (Cestraciontidæ).
Regan, C. T. 1908 D, 493 (Cestraciontidæ).
Ridewood, W. G. 1921 A, 369 (Cestraciontidæ).
Schlosser, M. 1917 A, 133, 134, 135, 136, 137, 139, 141, 147 ("cestraciontiden," "hybodontiden").
Schmalhausen, J. J. 1913 A, 24 (Heterodontidæ).
Secerov, S. 1911 A, 8, 10, pl. i (Cestracion).
Steinmann, G. 1907 A, 400 (Hybodontidæ, Cestraciontidæ).
Stromer, E. 1912 A, 19 (Cestraciontidæ); 20 (Hybodontidæ).
Strüver, J. 1864 B, 12, pls. i, ii (Heterodontoidæ).
Terra, P. 1911 A, 199 (Cestraciontidæ).
Van Wijhe, J. W. 1922 A, 291 (Cestracionidæ).
Versluys, J. 1922 B, 96 (Heterodontidæ).
Waite, E. R. 1896 A, 325 ("cestracions").
Wallace, A. R. 1876 A, ii, 461 (Cestraciontidæ).
Whitehouse, R. H. 1910 C, 325 (Heterodontus).
Woodward, A. S. 1891 E, 62 ("hybodonts," "cestracionts").
1912 A, (1911), 213 (Cestraciontidæ).
1921 B, 37 ("hybodonts").
Zittel and Koken 1911 A, 53, 56 (Hybodontidæ, Cestracionidæ).
Zittel and Schlosser 1923 A, 58 (Hybodontidæ).

Orodus Agassiz. Type *O. cinctus* Agassiz.

Hay, O. P. 1902 A, 295.
Agassiz, L. 1844 C, 267.
Barkas, W. J. 1874 D, 547.
Bronn, H. G. 1848 B, 852.
1849 A, 646.
Cushing, H. P. 1912 A, 581.
Dean, B. 1909 C, 249.
Eastman, C. R. 1902 B, 77.
1907 B, 75.
1909 A, 489.
Eastman, Gregory and Matthew 1917 A, 117.
Egerton, P. G. 1853 C, 282.
Giebel, C. G. 1855 A, 115.
Goodrich, E. S. 1909 A, 147.
Hay, O. P. 1901 B, 67, 70.
1912 A, 36.
Heilprin, A. 1887 A, 300.
Hoernes, R. 1886 A, 543.
Jordan, D. S. 1923 A, 95.
Mantell, G. A. 1844 A, 618, fig. 128.
Miller, A. M. 1916 A, 72.
Pompeckj, J. F. 1913 A, 1125.
Raymond, P. E. 1925 B, 554.
Savage, T. E. 1902 A, 257.
Schlosser, M. 1917 A, 133.
Zittel and Koken 1911 A, 53.
Zittel and Schlosser 1923 A, 59, figs. 15, 92.

Orodus alleni St. John and Worth.

Hay, O. P. 1902 A, 295.
Pennsylvanian; Iowa.

Orodus carinatus St. John and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Keokuk); Iowa.

Orodus colletti Newb.

Hay, O. P. 1902 A, 295.
Branson, E. B. 1906 A, 1394.
Mississippian (Salem); Indiana.

Orodus dædaleus St. John and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Kinderhook); Iowa.

Orodus decussatus St. John and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Kinderhook); Iowa.

Orodus devonicus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 153, pl. xliv, fig. 4.
Upper Devonian (Genesee); New York.

Orodus elegantulus Newb. and Worth.

Hay, O. P. 1902 A, 295.
Claypole, E. W. 1903 A, 319, 321.
Eastman, C. R. 1907 B, 18.
Hussakof and Bryant 1919 A, 153.
Mississippian (Burlington); Iowa, Indiana: Mississippian?; Ohio.

Orodus fastigiatus St. John and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Burlington); Iowa.

Orodus gibbosus (Newb. and Worth.).

Hay, O. P. 1902 A, 295.
Mississippian (Keokuk); Illinois, Iowa.

Orodus intermedius Eastman.

Eastman, C. R. 1903 B, 183, pl. iv, figs. 35, 36.
Pennsylvanian (Missourian); Missouri.

Orodus major St. John and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Burlington); Iowa.

Orodus mammillaris Newb. and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Keokuk); Illinois.

Orodus minutus Newb. and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Keokuk); Illinois.

Orodus neglectus St. John and Worth.

Hay, O. P. 1902 A, 295.
Branson, E. B. 1906 A, 1391, pl. xlii, figs. 35, 36 (This species?).
Mississippian (St. Louis); Illinois, Iowa: (Salem); Indiana.

Orodus ornatus Newb. and Worth.

Hay, O. P. 1902 A, 295.
Savage, T. E. 1902 A, 262 (O. ornatissimus).
Mississippian (Keokuk); Illinois, Iowa.

Orodus? parallellus St. John and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (Kinderhook); Iowa.

Orodus parvulus St. John and Worth.

Hay, O. P. 1902 A, 295.
Mississippian (St. Louis); Illinois.

Orodus plicatus Newb. and Worth.

Hay, O. P. 1902 A, 296.
Mississippian (St. Louis); Missouri.

Orodus ramosus Agassiz.

Hay, O. P. 1902 A, 296.
Brongniart, C. 1888 C, 47.
Hussakof, L. 1908 A, 32.
Worthen, A. H. 1866 A, 115 (O. multicarinatus).
Mississippian (Kinderhook); Indiana: Waverly); Michigan.

Orodus simplex Branson.

Branson, E. B. 1906 A, 1392, pl. xlii, figs. 25, 26.
Mississippian (Salem); Indiana.

Orodus tuberculatus Newb. and Worth.

Hay, O. P. 1902 A, 296.
Mississippian (Burlington); Illinois, Iowa.

Orodus turgidus St. John and Worth.

Hay, O. P. 1902 A, 296.
Mississippian (Chester); Illinois.

Orodus variabilis Newb.

Hay, O. P. 1902 A, 296.
Newberry, J. S. 1874 G, 94, 98.
Mississippian (Waverly); Ohio, Kentucky.

Orodus variocostatus St. John and Worth.

St. John and Worthen 1875 A, 304, pl. vii, figs. 1-9.
Hay, O. P. 1902 A, 296.
Mississippian (Burlington); Illinois, Iowa.

EOÖRODUS Branson. Type *E. typus* Branson.

Branson, E. B. 1914 A, 68.
Jordan, D. S. 1923 A, 95.

Eoörodus typus Branson.

Branson, E. B. 1914 A, 68, pl. iv, figs. 22-24.
Upper Devonian (Craghead); Missouri.

LEIODUS St. John and Worth. Type *L. calcaratus* St. John and Worth.

Hay, O. P. 1902 A, 296.
1901 B, 67.
Jordan, D. S. 1923 A, 95.

Leiodus calcaratus St. John and Worth.

Hay, O. P. 1902 A, 296.
Mississippian (Burlington); Iowa, Illinois.

Leiodus grossipunctatus St. John and Worth.

Hay, O. P. 1902 A, 296.
Mississippian (Burlington); Iowa, Illinois.

MESODMODUS St. John and Worth. Type *M. exsculptus* St. John and Worth.

Hay, O. P. 1902 A, 297.
1901 B, 67.
Jordan, D. S. 1923 A, 95.

Mesodmodus explanatus St. John and Worth.

Hay, O. P. 1902 A, 297.
Mississippian (Kinderhook); Iowa.

Mesodmodus exsculptus St. John and Worth.

Hay, O. P. 1902 A, 297.
Mississippian (Kinderhook); Iowa.

Mesodmodus ornatus St. John and Worth.

Hay, O. P. 1902 A, 297.
Mississippian (Burlington); Iowa, Illinois.

DESMIODUS St. John and Worth. Type *D. tumidus* St. John and Worth.

Hay, O. P. 1902 A, 297.
1901 B, 67.
Jordan, D. S. 1923 A, 95.

Desmiodus costelliferus St. John and Worth.

Hay, O. P. 1902 A, 297.
Branson, E. B. 1906 A, 1392 (D. costelliferous).
Mississippian (St. Louis); Illinois, Missouri.

Desmiodus? flabellum St. John and Worth.

Hay, O. P. 1902 A, 297.
Mississippian (Keokuk); Missouri.

Desmiodus? ligoniformis St. John and Worth.

Hay, O. P. 1902 A, 297.
Mississippian (Keokuk); Missouri, Iowa.

Desmiodus minusculus (Newb. and Worth.).

Hay, O. P. 1902 A, 297.
Mississippian (Keokuk); Illinois.

Desmiodus salemensis Branson.

Branson, E. B. 1906 A, 1392, pl. xlii, figs. 12-14.
Mississippian (Salem); Indiana.

Desmiodus tumidus St. John and Worth.

Hay, O. P. 1902 A, 297.
Mississippian (St. Louis); Illinois, Missouri.

PETRODUS M'Coy, F. Type *P. patelliformis* M'Coy.

Hay, O. P. 1902 A, 297.
Barkas, W. J. 1874 D, 547.
Eastman, C. R. 1903 B, 219.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1923 A, 95.
Woodward, A. S. 1903 A, 488.
Zittel and Koken 1911 A, 63.

Petrodus acutus Newb. and Worth.

Hay, O. P. 1902 A, 297.
Woodward, A. S. 1903 A, 487, fig. 9.
Pennsylvanian; Illinois.

Petrodus buttersi Newberry.

Newberry, J. S. 1889 A, pl. xxvii, fig. 1.
Hussakof, L. 1908 A, 50.
Pennsylvanian; Illinois.

Petrodus occidentalis Newb. and Worth.

Hay, O. P. 1902 A, 298.
Keyes, C. R. 1888 B, 26 (This species?).
1891 A, 332.
Savage, T. E. 1922 A, 238, 240, 246.
Shaw and Savage 1912 A, 7.
Pennsylvanian; Illinois, Indiana, Iowa.

Petrodus? pustulosus Newb. and Worth.

Hay, O. P. 1902 A, 298.
Mississippian (Burlington); Iowa.

STEMMATIAS Hay. Type *Stemmatodus cheiriformis* St. John and Worth.

Hay, O. P. 1902 A, 298.
Eastman, C. R. 1903 B, 219.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1923 A, 95.

Stemmatias bicristatus (St. John and Worth.).

Hay, O. P. 1902 A, 298.
Mississippian (Burlington); Iowa.

Stemmatias bifurcatus (St. John and Worth.).

Hay, O. P. 1902 A, 298.
Mississippian (Burlington); Iowa.

Stemmatias cheiriformis (St. John and Worth.).

Hay, O. P. 1902 A, 298.
Mississippian (Burlington); Iowa.

Stemmatias compactus (St. John and Worth.).

Hay, O. P. 1902 A, 298.
Mississippian (Chester); Illinois.

Stemmatias keokuk (St. John and Worth.).

Hay, O. P. 1902 A, 298.
Mississippian (Keokuk); Illinois, Iowa.

Stemmatias simplex (St. John and Worth.).

Hay, O. P. 1902 A, 298.
Mississippian (Burlington); Iowa.

Stemmatias symmetricus (St. John and Worth.).

Hay, O. P. 1902 A, 298.
Mississippian (Burlington); Iowa.

HYBODUS Agassiz. Type *H. plicatilis* Agassiz. See, however, Jordan 1923 A, 95.

Hay, O. P. 1902 A, 299.
Abel, O. 1908 E, 402.
1919 A, 119, fig. 77.
1920 A, 327, 330, fig. 517.
Agassiz, L. 1844 D, 142 ("hybodontes").
Aichel, O. 1919 A, 242.
Alessandri, G. 1910 A, 31.
Andreæ, A. 1900 A, 470 (Hybodus); 471 (Orthohybodus, Parahybodus).
Arldt, T. 1923 A, 487.

Barkas, W. J. 1874 B, 163, figs. 1, 2.
1874 C, 287.
1874 D, 546.
Branca, W. 1908 C, 395.
Bridge, T. W. 1904 A, 445.
Bronn, H. G. 1848 A, 598.
1849 A, 650.
Broom, R. 1909 A, 252, pl. xii, fig. 1.
Case, E. C. 1915 A, 124.
Charlesworth, E. 1839 A, 242, pl. iv.
Coulon, L. 1903 A, 112.
Day, E. C. H. 1865 A, 565.
Dean, B. 1909 C, 249.
Deecke, W. 1926 A, 185.
Dollo, L. 1889 F, 336.
Eastman, C. R. 1902 B, 77.
1911 B, 184.
Egerton, P. G. 1855 A, 8 B, 2.
Evans, H. M. 1923 A, 15, text-fig. 8.
Flower, W. H. 1886 A, 285.
Fürbringer, K. 1904 B, 464.
Fraas, E. 1889 B, 233.
1895 A, 24.
Gervais, P. 1852 A, explan. pls. lxxvii, lxxviii.
1859 A, 525, 526, pls. lxxvii, lxxviii.
Giebel, C. G. 1855 A, 114, pl. xlvii.
Goodrich, E. S. 1908 A, 753.
1909 A, 511.
Hay, O. P. 1901 B, 67, 71 (Hybodus, Parahybodus, Orthohybodus).
Humphreys, J. 1908 A, 11.
Heilprin, A. 1887 A, 300.
Jacobshagen, E. 1923 A, 178.
Jaekel, O. 1898 D, 151.
1903 F, 36.
1906 C, 158.
Jordan, D. S. 1919 B, 186.
1923 A, 95.
Krause, P. G. 1901 A, 120.
Klaatsch, H. 1890 A, 121.
Koken, E. 1893 B, 384.
1904 A, 304.
1907 A, 261, pls. xi-xiv.
Mantell, G. A. 1844 A, 609, fig. 129.
Owen, R. 1845 B, 56, pl. xi, fig. 1.
Philippi and Frech 1903 A, 10, pl. i.
Pompeckj, J. F. 1913 A, 1125, figs. 25, 27.
Priem, F. 1908 B, 3, figs. 1-3, 9.
Regan, C. T. 1906 A, 748.
Reis, O. M. 1894 A, 61.
Ridewood, W. G. 1896 A, 383.
1921 A, 344.
Sauvage, E. 1867 A, 107.
1902 C, 180.
Schlesinger, G. 1909 A, (142).
Schlosser, M. 1917 A, 135, 139.
Schmidt, M. 1921 A, 103, figs. 1, 2.
Stensiö, E. A. 1921 A, 1.
1925 A, 126, fig. 31.
Storms, R. 1891 A, 145.
Stromer, E. 1917 A, 23.
1925 A, 19, 21.
Terra, P. 1911 A, 202, fig. 52.
Traquair, R. H. 1900 C, 505.
Williamson, W. C. 1851 A, 679.
Woodward, A. S. 1891 E, 62, pls. i, ii.
1896 E, 69.
1915 B, lxvii.
1917 C, 541.
1919 A (1916), 3, pls. i-iii; text-figs. 1-5.
1921 A, 179.
1921 B, 30, fig. 1.
1921 C, 179.
1922 C, 70, fig. 68.
1924 B, 340.
Zittel and Koken 1911 A, 53, fig. 89.
Zittel and Schlosser 1923 A, 59, figs. 11, 93, 96.

Hybodus clarkensis Cragin.

Hay, O. P. 1902 A, 299.
Upper Cretaceous ("Neocomian"); Kansas.

Hybodus copei Hay.

Hay, O. P. 1902 A, 299.
Hussakof, L. 1908 A, 31.
Triassic?; Texas.

Hybodus nevadensis Wemple.

Wemple, E. M. 1906 A, 72, pl. vii, fig. 3.
Jordan and Hannibal 1923 A, 30, 61.
Merriam, J. C. 1908 C, 18.
Triassic (Middle); Nevada.

Hybodus polyprion Agassiz.

Hay, O. P. 1902 A, 299.
Cockerell, T. D. A. 1908 C, 161.
Marsh, O. C. 1899 A, 230.
Upper Jurassic (Stonesfield); England: (Morrison); Wyoming.

Hybodus shastensis Wemple.

Wemple, E. M. 1906 A, 73, pl. vii, fig. 4.
Jordan, D. S. 1907 A, 98, fig. 1.
Jordan and Beal 1913 A, 246.
Jordan and Hannibal 1923 A, 30, 61.
Triassic (Upper); California.

Hybodus sp. indet.

Case, E. C. 1915 A, 96.
Hussakof, L. 1911 A, 157, pl. xxx, fig. 5.
Permian (Wichita?, Clear Fork?); Texas.

Acrodus Agassiz. Type *A. gaillardoti* Agassiz.

Hay, O. P. 1902 A, 299.
Agassiz, L. 1844 C, 267.
Alessandri, G. 1910 A, 34.
Ameghino, F. 1906 A, 186.
Andreæ, E. 1900 A, 471.
Barkas, W. J. 1874 D, 544.
Bridge, T. W. 1904 A, 445.
Bronn, H. G. 1848 A, 8.
1849 A, 648.
Coulon, L. 1903 A, 115.
Deecke, W. 1926 A, 185.
Egerton, P. G. 1855 A, 8 B, 2.
Fowler, H. W. 1911 A, 28.
Fraas, E. 1889 B, 233 (Acrodus); 234 (Sphenonchus).
Gervais, P. 1852 A, explan. pl. lxxvii.
1859 A, 525, pl. lxxvii.
Giebel, C. G. 1855 A, 115.

Hay, O. P. 1901 B, 67, 71.
Heilprin, A. 1887 A, 300.
Humphreys, J. 1908 A, 11.
Jordan, D. S. 1905 A, i, 528.
1923 A, 95.
Klaatsch, H. 1890 A, 122.
Koken, E. 1893 B, 384.
Moodie, R. L. 1926 A, 61, 79, 81, pl. ix.
Owen, R. 1845 B, 54, pls. xiv-xvi.
1866 A, 378.
Philippi and Frech 1903 A, 11, pl. i.
Pompeckj, J. F. 1913 A, 1125, fig. 24.
Priem, F. 1908 B, 4.
Reynolds, S. H. 1897 A, 109.
Sauvage, E. 1867 A, 106.
Schlosser, M. 1917 A, 135.
Stensiö, E. A. 1921 A, 8.
Storms, R. 1891 A, 114.
Woodward, A. S. 1915 B, lxvii.
1917 C, 541.
1919 A, (1916), 14.
1922 C, 70, fig. 69.
1924 B, 342.
Zittel and Koken 1911 A, 54.
Zittel and Schlosser 1923 A, 60, fig. 97.

Acrodus alexandræ Wemple.

Wemple, E. M. 1906 A, 71, pl. vii, figs. 5, 6.
Jordan and Hannibal 1923 A, 30, 61.
Merriam, J. C. 1908 C, 18.
Triassic (Middle); Nevada.

Acrodus emmonsi Leidy.

Hay, O. P. 1902 A, 299.
Miocene?; North Carolina.

Acrodus humilis Leidy.

Hay, O. P. 1902 A, 299.
Fowler, H. W. 1911 A, 28, fig. 3.
Upper Cretaceous (Vincentown); New Jersey.

Acrodus oreodontus Wemple.

Wemple, E. M. 1906 A, 72, pl. vii, figs. 1, 2.
Jordan and Hannibal 1923 A, 30, 61.
Merriam, J. C. 1908 C, 18.
Triassic (Middle); Nevada.

Acrodus wempliæ Jordan.

Jordan, D. S. 1907 A, 100, fig. 2.
Jordan and Beal 1913 A, 245, 246.
Jordan and Hannibal 1923 A, 30, 61.
Triassic (Upper); California.

Wodnika Münster. Type *Acrodus althausii* Münster.

Münster, G. 1843, Beitr. Petrefact., 48.
Case, E. C. 1926 B. 196 (Wodnikia).
Jordan, D. S. 1923 A, 95.
Jordan and Gilbert 1919 A, 17, 20.
Schlosser, M. 1917 A, 134.
Woodward, A. S. 1889 D, 248.

Wodnika ocoyæ Jordan and Gilbert.

Jordan and Gilbert 1919 A, 17, 19, pl. vii, fig. 8.
Jordan, D. S. 1923 A, 95 ("Not a tooth but a concretion").
Jordan and Hannibal 1923 A, 32 ("chalcedony concretion").

Strophodus Agassiz. Type *S. reticulatus* Agassiz.

Agassiz, L. 1843 B, (1838), iii, 116.
Coulon, L. 1903 A, 116.
Gervais, P. 1852 A, explan. pl. lxxviii.
1859 A, 526, pl. lxxviii.
Giebel, C. G. 1855 A, 115.
Heilprin, A. 1887 A, 300.
Jordan, D. S. 1923 A, 95.
Nicholson and Lydekker 1889 A, 943 (Syn. of Asteracanthus).
Owen, R. 1869 C, 193, pl. vii.
Pompeckj, J. F. 1913 A, 11-25, fig. 27.
Priem, F. 1911 C, 7, pl. ii.
Sauvage, E. 1867 A, 101.
Woodward, A. S. 1889 D, 307, 314 (Syn. of Asteracanthus).
Woodward, A. S. 1898 B, 46 (Syn. of Asteracanthus).
1922 C, 71, fig. 70.
Zittel and Schlosser 1923 A, 62, figs. 98, 99.

Strophodus shastensis Bryant.

Bryant, H. C. 1914 A, 27, figs. 1, 2.
Jordan and Hannibal 1923 A, 32, 61 (Asteracanthus).
Zittel and Schlosser 1923 A, 62.
Triassic (Upper); California.

Strophodus sp. indet.

Bryant, H. C. 1914 B, 155. Upper Triassic; California.

Palæospinax Egerton. Type *Thyellina prisca* Agassiz.

Egerton, P. G. 1872, Mem. Geol. Surv. Unit. Kingd., Dec. 13, No. 7.
Bridge, T. W. 1904 A, 197, 445.
Davis, J. W. 1881 C, 429, pl. xx.
Dean, B. 1909 C, 254.
Dollo, L. 1889 F, 337.
Egerton, P. G. 1873 A, 420.
Evans, H. M. 1923 A, 15, text-fig. 7.
Goodrich, E. S. 1909 A, 144.
Jaekel, O. 1898 D, 152.
Jordan, D. S. 1905 A, i, 528.
Jordan, D. S. 1923 A, 96.
Koken, E. 1907 A, 271.
Lambe, L. M. 1918 B, 27.
Nicholson and Lydekker 1889 A, 943.
Pompeckj, J. F. 1913 A, 1126.
Regan, C. T. 1906 A, 723 (To Palæospinacinæ).
Sternberg, C. M. 1926 A, 104.
Storms, R. 1891 A, 144.
Woodward, A. S. 1889 D, xvii, 321.
1898 B, 46.
1915 B, lxix.

Zittel, K. A. 1890 A, 87.
Zittel, Eastman, etc. 1902 A, 29.
Zittel and Koken 1911 A, 56.
Zittel and Schlosser 1923 A, 62.

Palæospinax ejuncidus Lambe.

Lambe, L. M. 1918 B, 27, figs.
Upper Cretaceous (Edmonton); Alberta.

SYNECHODUS Woodward. Type *Hybodus dubrisiensis* Mackie.

Woodward, A. S. 1888 I, 288.
Chapman, F. 1918 A, 5, 31, pl. v, figs. 11, 13.
Eastman, C. R. 1901 B, 102.
Jordan, D. S. 1923 A, 96.
Leriche, M. 1902 A, 29.
Priem, F. 1908 B, 59, 77, figs. 20, 34-37.
1911 C, 14, 22, text-figs. 1, 2, 10, 11.
Schlosser, M. 1917 A, 139, 141.
Storms, R. 1891 A, 144.
Woodward, A. S. 1889 D, 325, fig. 12.
1891 E, 65, pl. ii.
1896 E, 70.
1898 B, 46, fig. 36.
1912 A, (1911), 216, pls. xlv, xlvi.
Zittel and Schlosser 1923 A, 62.

Synechodus clarkii Eastman.

Eastman, C. R. 1901 B, 103, pl. xiv, figs. 5*a*, 5*b*, 5*c*.
Clark and Miller 1912 A, 117, 118.
Leriche, M. 1902 A, 30 (S. clarki).
Miller, B. L. 1911 A, 103.
1912 A, 2 (S. clarki).
Shattuck, Miller and Bibbins 1907 A, 5.
Eocene (Aquia); Maryland.

Synechodus sp. indet.

Dumble, E. T. 1920 A, 175 (Synecodus).
Eocene (Jackson); Texas.

EDESTOIDÆ, new name.

EDESTIDÆ Jaekel.

Jaekel, O. 1899 A, 298.
Abel, O. 1908 D, (208) ("edestiden").
1912 F, 569 ("edestiden").
1919 A, 136.
Eastman, C. R. 1900 F, 579.
1917 A, 269.
Fuchs, T. 1900 A, 5 ("edestiden").
Goodrich, E. S. 1909 A, 147.
Gregory, W. K. 1907 D, 446.
Jaekel, O. 1900 A, 148 ("edestiden").
1911 A, 56.
Jordan, D. S. 1923 A, 96.
Karpinsky, A. P. 1902 A, 205.
1911 A, 1105 ("édestides").
Karpinsky, A. P. 1912 A, 69.
1915 A, 123 ("édestides").
1922 B, 379.
Klaatsch, H. 1901 A, 435 ("edestiden").
Pompeckj, J. F. 1913 A, 1126.
Sauvage, H. E. 1901 D, 69 ("edestiden").
Schlosser, M. 1917 A, 134 ("edestiden").
Stromer, E. 1905 A, 132 ("edestiden").
1912 A, 22.
Woodward, A. S. 1902 E, 230 ("édestides").
1924 A, 111, 112.
Zittel and Koken 1911 A, 58.
Zittel and Schlosser 1923 A, 63.

CAMPODUS Koninck. Type *C. agassizianus* Koninck.

Hay, O. P. 1902 A, 296.
Abel, O. 1912 F, 489, 567.
Barkas, W. J. 1874 D, 545 (Campodus); 547 (Lophodus).
Brongniart, C. 1888 C, 48.
Bronn, H. G. 1848 A, 208.
Eastman, C. R. 1901 A, 795.
1902 B, 56, 57, 70; pls. 1-3.
1902 E, 852.
1902 F, 267.
1902 H, 150, 151.
1903 B, 184.
1903 D, 285.
1905 C, 405.
1917 C, 214.
Eastman, Gregory and Matthew 1917 A, 117.
Hay, O. P. 1901 B, 67, 70.
1909 C, 58.
1912 A, 36.
Jordan, D. S. 1923 A, 95.
Karpinsky, A. P. 1903 A, 32, figs. 2-5.
1922 B, 379.
1925 A, 128.
Mudge, B. F. 1875 A, 122 (Agazodus).
Pompeckj, J. F. 1913 A, 1126.
Raymond, P. E. 1925 B, 554.
Stevenson, J. J. 1907 A, 168 (Lophodus).
Schlosser, M. 1917 A, 133.
Stromer, E. 1905 A, 133.
Van de Wiele, C. 1902 A, 246.
Woodward, A. S. 1917 F, 3, pl. 1, figs. 8-10.
1921 B, 34.
1924 A, 112.
Zittel and Koken 1911 A, 57.
Zittel and Schlosser 1923 A, 63.

Campodus basalis (Cope).

Hay, O. P. 1902 A, 296.
Pennsylvanian; Illinois.

Campodus corrugatus (Newb. and Worth.).

Hay, O. P. 1902 A, 296.
Branson, E. B. 1916 A, 644, pl. iii, figs. 1-6.
Eastman, C. R. 1902 E, 853, 854; fig. 2.
Mason, S. C. 1883 A, 13 (Agassizodus).
Pennsylvanian; Illinois, Kansas, Wyoming.

Campodus scitulus (St. John and Worth.).

Hay, O. P. 1902 A, 296.
Eastman, C. R. 1902 B, 97.
1902 G, 540.
1903 B, 194.
Pennsylvanian (Mazon Creek); Illinois.

Campodus variabilis (Newb. and Worth.).

Hay, O. P. 1902 A, 296.
Abel, O. 1912 F, 491, fig. 373.
Eastman, C. R. 1902 B, 57, pls. i-iii; text-fig. 2.
1902 D, 659.
1902 E, 854.
1903 B, 184, pl. i, fig. 1, pl. ii, figs. 15, 16; text-fig. 10.
1903 D, 283.
1905 C, 406.
Hussakof, L. 1908 A, 43.
Karpinsky, A. P. 1903 A, 33.
1922 B, 383.
Karpinsky, A. P. 1925 A, 128, figs. 1, 10, 12.
Pompeckj, J. F. 1913 A, 1126, fig. 28.
Raymond, P. E. 1925 B, 554.
Smith, G. L. 1915 A, 282 (Agassizodus).
Springer, F. 1924 A, 234 (Agassizodus).
Van de Wiele, C. 1902 A, 246.
Woodruff, E. G. 1906 A, 288, 290, pl. xviii, fig. 1.
Woodward, A. S. 1917 F, 4, figs. A, B.
1924 B, 342.
Zittel and Koken 1911 A, 57, figs. 97, 98.
Zittel and Schlosser 1923 A, 63, fig. 102.
Subcarboniferous; Belgium: Pennsylvanian (Missourian); West Virginia, Iowa, Kansas, Illinois, Iowa, Nebraska.

Campodus virginianus (St. John and Worth.).

Hay, O. P. 1902 A, 297.
Pennsylvanian; West Virginia.

Campodus sp. indet.

Branson, E. B. 1916 A, 645, pl. ii, figs. 21, 21*a*
Pennsylvanian (Embar); Wyoming.

SCOLIORHIZA Raymond. Type *S. kellyi* Raymond.

Raymond, P. E. 1925 B, 555.

Scoliorhiza kellyi Raymond.

Raymond, P. E. 1925 B, 555, fig. 2.
Triassic (Upper Banff); Alberta.

Scoliorhiza whitei (St. John and Worth.).

Hay, O. P. 1902 A, 296 (Orodus).
Raymond, P. E. 1925 B, 554, 555 (Orodus, Scoliorhiza).
Mississippian (Kinderhook); Iowa, Mississippian? (Upper Banff limestone); Alberta.

EDESTUS Leidy. Type *E. vorax* Leidy.

Hay, O. P. 1902 A, 337.
Abel, O. 1912 F, 567.
Barkas, W. J. 1874 D, 546 (Edestes).
Dean, B. 1912 A, 227.
Eastman, C. R. 1900 F, 580.
1901 A, 795.
1902 B, 55, 64, 70.
1902 D, 658.
1902 F, 267.
1902 H, 148, 151.
1903 B, 185.
1903 D, 281, 286.
1905 C, 405.
1912 C, 657.
1917 A, 269.
1917 C, 214.
Eastman, Gregory and Matthew 1917 A, 117.
Fuchs, T. 1900 A, 5.
Goodrich, E. S. 1909 A, 147.
Hay, O. P. 1907 A, 23.
1909 C, 43, 50, 57.
1912 A, 31.
Jaekel, O. 1901 A, 557 ("edestiden").
Jordan, D. S. 1905 A, i, 529.
1910 B, 186.
1919 B, 272.
1923 A, 96.
Karpinsky, A. P. 1902 A, 207.
1911 A, 1113.
1912 A, 72.
Karpinsky, A. P. 1915 A, 125.
1916 A, 701.
1922 B, 379.
1925 A, 128, fig. 7.
Kemna, A. 1902 A, 234.
Lydekker, R. 1910 F, 675.
1913 A, 24.
Missuna, A. 1908 A, 529.
Moodie, R. L. 1913 A, 188.
Newton, E. T. 1904 A, 1.
1917 A, 6.
Pompeckj, J. F. 1913 A, 1126.
Priem, F. 1900 B, 122.
Renevier, E. 1900 A, vi.
Sauvage, H. E. 1901 D, 69.
Van de Wiele, C. 1902 A, 244.
Woodward, A. S. 1890 F, 147.
1900 F, 34.
1902 E, 232.
1915 B, lxvi.
1917 F, 1, 6, pl. i.
1924 A, 110, fig. 3.
Zittel and Koken 1911 A, 58.
Zittel and Schlosser 1923 A, 63.

Edestus crenulatus Hay.

Hay, O. P. 1909 C, 43, pl. xii, figs. 1-3, text figs. 1, 2.
Abel, O. 1912 F, 567, fig. 439.
1920 A, 331, fig. 524.

Hay, O. P. 1912 A, 35.
Karpinsky, A. P. 1911 A, 1107.
1912 A, 72.
1922 B, 381, 384, figs. 6, 7.
1925 A, 130, fig. 7.
Pompeckj, J. F. 1913 A, 1127, fig. 29.
Zittel and Koken 1911 A, 58, fig. 99.
Zittel and Schlosser 1923 A, 64, fig. 103.
Pennsylvanian; Illinois?

Edestus giganteus Newb.

Hay, O. P. 1902 A, 337.
Eastman, C. R. 1902 B, 72, fig. 6*c*.
Hussakof, L. 1908 A, 46.
Karpinsky, A. P. 1902 A, 207, fig. 5.
1911 A, 1113.
1912 A, 81.
1916 A, 708.
1925 A, 136.
Newberry, J. S. 1889 A, 225, pl. xl.
Priem, F. 1900 B, 121, fig. 2.
Pennsylvanian; Illinois.

Edestus heinrichsii Newb. and Worth.

Hay, O. P. 1902 A, 337.
Eastman, C. R. 1902 B, 65, 66, 72; figs. 6*a*, 7 (E. heinrichi).
1902 D, 659 (E. heinrichi).
1903 D, 288 (E. heinrichi).
1905 C, 406 (E. heinrichi).
1917 A, 269, pl. vi, fig. 1 (E. heinrichi).
Hay, O. P. 1909 C, 43, pl. xiii, figs. 1, 2, 3 (E. heinrichii).
1912 A, 35, 37 (E. heinrichi).
Hussakof, L. 1908 A, 47 (E. heinrichsi).
Jaekel, O. 1900 A, 145.
Karpinsky, A. P. 1902 A, 206, fig. 4 (E. heinrichsi).
1911 A, 1107 (E. heinrichi).
1912 A, 72.
1922 B, 380 (E. heinrichi).
Misuna, A. 1908 A, 533, fig. 3 (E. heinrichi).
St. John, O. 1902 A, 658 (E. heinrichi).
Pennsylvanian; Illinois, Indiana, Iowa.

Edestus minor Newb.

Hay, O. P. 1902 A, 337.
Eastman, C. R. 1902 B, 65, 66, 72.
1902 D, 654, 659, fig. 3.
1902 H, 148.
1903 D, 288, pl. xxi, figs. 2, 3.
Hay, O. P. 1909 C, 48, text-fig. 6.
1912 A, 36.
Hussakof, L. 1908 A, 47.
Hussakof and Bryant 1919 A, 163.
Karpinsky, A. P. 1902 A, 205, figs. 1, 2.
1911 A, 1113.
1912 A, 80.
1922 B, 380, 384.
Newton, E. T. 1904 A, 2, fig. 1.
St. John, O. 1902 A, 658, fig. 3 (E. vorax).
Woodward, A. S. 1917 F, 4, fig. D.
Pennsylvanian; Indiana.

Edestus mirus Hay.

Hay, O. P. 1912 A, 31, 36, pls. i, ii.
Karpinsky, A. P. 1915 A, 124, fig. 2.
1916 A, 707.
1922 B, 386, fig. 11.
Woodward, A. S. 1917 F, 3.
1924 A, 111, fig. 4.
Pennsylvanian; Iowa.

Edestus serratus Hay.

Hay, O. P. 1909 C, 47, pl. xii, fig. 4, text-figs. 3, 4.
Karpinsky, A. P. 1911 A, 1114.
1912 A, 82.
Pennsylvanian; Illinois?

Edestus vorax Leidy.

Hay, O. P. 1902 A, 337.
Collett, J. 1872 A, 203.
Eastman, C. R. 1902 B, 75, fig. 6*b*.
1902 D, 659.
Hay, O. P. 1912 A, 35.
Karpinsky, A. P. 1902 A, 205.
1912 A, 81.
1916 A, 708.
Pennsylvanian; Arkansas.

TOXOPRION Hay. Type *Edestus lecontei* Dean.

Hay, O. P. 1909 C, 56, 57.
Abel, O. 1912 F, 567, 568.
Eastman, C. R. 1903 D, 286 (Campyloprion).
Hay, O. P. 1912 A, 31.
Jordan, D. S. 1923 A, 96.
Karpinsky, A. P. 1912 A, 86.
1922 B, 385.
Lydekker, R. 1910 F, 676.
Pompeckj, J. F. 1913 A, 1126.
Zittel and Schlosser 1923 A, 63.

Toxoprion lecontei Dean.

Hay, O. P. 1902 A, 337 (Edestus).
Eastman, C. R. 1900 F, 580 (Edestus).
Eastman, C. R. 1902 B, 65, 66 (Campyloprion).
1903 D, 286 (Campyloprion).
Hay, O. P. 1907 A, 23 (Edestus).
1909 C, 52 (Edestus).
Jaekel, O. 1900 A, 147 (Edestus).
Karpinsky, A. 1902 A, 208, fig. 6 (Edestus lecomtei).
1912 A, 82, fig. 3 (Edestus).
1915 A, 125 (Edestus).
1922 B, 385.
1925 A, 135.
Sauvage, H. E. 1899 A, 4 (Edestus).
Pennsylvanian; Nevada.

CAMPYLOPRION Eastman. Type *C. annectans* Eastman.

Eastman, C. R. 1902 H, 148, 151.
Eastman, C. R. 1902 B, 56, 64, 70.
1903 B, 185.
1903 D, 283, 286.
Hay, O. P. 1907 A, 23.
1909 C, 56.
Jordan, D. S. 1905 A, i, 529.
1923 A, 96.

Karpinsky, A. P. 1911 A, 1117.
1912 A, 86 (Syn. of Helicoprion).

Campyloprion annectans Eastman.

Eastman, C. R. 1902 H, 151, pl. viii, fig. 2; text-fig. 3.
1902 B, 65, 66, pl. iv, text-figs. 3, 4.
Eastman, C. R. 1903 D, 286, pl. xxi, fig. 1.
Hay, O. P. 1909 C, 56.
Karpinsky, A. P. 1912 A, 82.
Van de Wiele, C. 1902 A, 246.
North America; Locality and geological age unknown.

HELICOPRIONIDÆ Karpinsky.

Karpinsky, A. P. 1911 A, 1113.

HELICOPRION Karpinsky. Type *H. bessonowi* Karpinsky.

Karpinsky, A. P. 1899 A.
Abel, O. 1904 B, 745.
1908 D, (208).
1912 F, 567, fig. 440.
1919 A, 139, fig. 102.
1920 A, 331, fig. 525.
Eastman, C. R. 1900 F, 580.
1901 A, 795.
1901 H, 151.
1902 B, 56.
1903 B, 185.
1903 D, 282, 286.
1905 C, 405.
1913 B, 677.
1917 B, 655.
Eastman, Gregory and Matthew 1917 A, 117.
Fuchs, H. 1900 A, 5.
Goodrich, E. S. 1909 A, 147, fig. 108.
Hay, O. P. 1907 A, 23.
1909 C, 50.
1912 A, 31.
Jaekel, O. 1900 A, 145.
Jordan, D. S. 1905 A, i, 529; ii, 574.
1920 B, 487.
1923 A, 96.
Karpinsky, A. P. 1902 A, 205, pl. C, text-figs. 7-9.
1911 A, 1105, figs. 1-5.
1912 A, 69, fig. 2.
1915 A, 117.
Karpinsky, A. P. 1916 A, 701.
1922 A, 369, figs. 1-3.
1922 B, 379.
1925 A, 127, figs. 5, 6.
Kemna, A. 1902 A, 233.
Klaatsch, H. 1901 A, 429.
Koken, E. 1901 A, 225, fig. 1.
Newton, E. T. 1917 A, 6.
Pompeckj, J. F. 1913 A, 1127, fig. 29.
Priem, F. 1900 B, 121, figs. 1, 3.
Renevier, E. 1900 A, vi.
Sauvage, H. E. 1901 D, 69.
Schlosser, M. 1917 A, 134.
Schoenichen, W. 1900 A, 503.
Simoens, G. 1902 A, 235, figs. 2, 3, 6.
Van den Broeck, E. 1902 A, 215.
Van de Wiele, C. 1902 A, 245.
Woodward, A. S. 1900 F, 33.
1902 A, 230.
1904 C, 189, fig. 3.
1915 B, lxvi.
1917 D, 6.
1921 B, 34.
1922 C, 68, fig. 65.
1924 A, 111, 112, fig. 4.
Zittel and Broili 1911 A, 59.
Zittel and Schlosser 1923 A, 63, fig. 104.
No species of this genus is yet known from N. America.

LISSOPRION Hay. Type *L. ferrieri* Hay.

Hay, O. P. 1907 A, 23.
Abel, O. 1912 F, 567.
1919 A, 139.
Hay, O. P. 1909 C, 52, 57.
Jordan, D. S. 1923 A, 96.
Karpinsky, A. P. 1911 A, 1117.
1912 A, 92.
Lydekker, R. 1910 F, 676.
Pompeckj, J. F. 1913 A, 1126.
Zittel and Koken 1911 A, 59.
Zittel and Schlosser 1923 A, 64.

Lissoprion ferrieri Hay.

Hay, O. P. 1907 A, 22, fig.
Abel, O. 1912 F, 568.
Hay, O. P. 1909 C, 52, pls. xiv, xv, text-fig. 7.
Hussakof, L. 1908 A, 49.
Karpinsky, A. P. 1911 A, 1118, figs. 5, 6.
1912 A, 82, figs. 4-6.
Lambe, L. M. 1917 E, 294.
Permo-carboniferous; Idaho.

Lissoprion sp. indet.

Lambe, L. M. 1917 E (This genus?).
Upper Pennsylvanian (Banff); Alberta.

Superfamily HEXANCHOIDÆ, new form.

Hay, O. P. 1902 A, 300 (Hexanchoidea).
Arldt, T. 1923 A, 483 ("notidanoiden").
Fowler, H. W. 1911 A, 23 (Notidani).
Garman, S. 1913 A, 11 (Hexanchoidei).
Gill, T. 1882 A, 967 (Opisthartbri).
Gill, T. 1885 A, lxiv (Opisthartbri).
1905 A, 657 (Diplospondyli, Opisarthri).
Goodrich, E. S. 1909 A, 139 (Notidani).
Gregory, W. K. 1907 D, 440 (Diplospondyli).
Jaekel, O. 1911 A, 61 (Notidani).

Pompeckj, J. F. 1913 A, 1124 (Notadanoidei).
Jordan, D. S. 1905 A, i, 523; ii, 583 (Notidani).
1907 B, 184 (Notidani).
1923 A, 97 (Notidani, Opistharthri).
Parker and Haswell 1897 A, 156 (Protoselachii).
Regan, C. T. 1906 A, 722, 739 (Notidanoidei); 740 (Hexanchoidei).
Rauther, M. 1913 A, 1097 (Notidanoidei).
Reynolds, S. H. 1897 A, 549 (Notidanidæ).
Ridewood, W. G. 1921 A, 313, 315 (Notidanoidei).
Stannius, H. 1854 A (Notidani).
Van Wijhe, J. W. 1922 A, 291 (Notadanoidei).
Versluys, J. 1922 B, 95 (Notidani).
Zittel and Woodward 1902 A, 25 (Diplospondyli).

HEXANCHIDÆ Gill.

Unless otherwise indicated, the authors, as cited, use for this family the name Notidanidæ.

Hay, O. P. 1902 A, 300 (Hexanchidæ).
Abel, O. 1919 A, 120.
Allis, E. P. 1913 A, 323.
1922 A, 152.
1923 A, 47.
1923 B, 167.
Arldt, T. 1907 D, 283.
1923 A, 483 ("hexanchiden").
Beer, G. R. 1926 A, 275 (Notidani).
Bonaparte, C. L. 1840 A, 45 (Notidani).
Braus, H. 1901 A, 180 ("notidaniden").
1904 A, 414 ("notidaniden").
1906 B, 557 ("notidaniden").
Bridge, T. W. 1904 A, 442.
Chapman, F. 1918 A, 4.
Cope, E. D. 1891 N, 17 (Hexanchidæ).
Cunningham, J. T. 1912 A, 246.
Daniel, J. F. 1916 A, 349 ("notidanid sharks").
Dollo, L. 1904 C, 48.
Duméril, A. 1856 A, 133 (Notidani).
Filatoff, D. 1907 A, 309.
Fitzinger, L. J. 1873 A, 56 (Notidani).
Fowler, H. W. 1911 A, 23 (Hexanchidæ).
Fuchs, H. 1907 C, 27 ("notidaniden").
Fürbringer, K. 1903 A, 361.
Garman, S. 1913 A, 2, 11 (Hexeptranchidæ).
Gaupp, E. 1898 B, 860 ("notidaniden").
1905 D, 868 ("notidaniden").
Gegenbaur, C. 1870 C, 402 ("notidaniden").
Gill, T. 1905 A, 658 (Hexanchidæ).
Goodey, T. 1910 A, 550, 560.
Goodrich, E. S. 1909 A, 143.
Haswell, W. A. 1884 A, 112.
Hay, O. P. 1901 B, 67 (Hexanchidæ).
Hilzheimer, M. 1913 A, 469.
Hoernes, R. 1886 A, 541.
Huber, O. 1901 A, 600.
Koken, E. 1904 A, 305 ("notidaniden").
Imms, A. D. 1905 A, 44.
Jordan, D. S. 1905 A, i, 524; ii, 574 (Hexanchidæ).
1907 B, 185, 758 (Hexanchidæ).
1923 A, 97 (Hexanchidæ).
Jordan and Gilbert 1882 A, 34, 62.
Kingsley, J. S. 1885 A, 74 (Notidanidæ, Hexanchidæ).
Krall, A. 1908 A, 529 (Hexanchidæ).
Lakjer, T. 1927 A, 281.
Lawley, R. 1877 A, 62 (Squalidi).
Leigh-Sharpe, W. H. 1926 A, 338
Leunis and Ludwig 1883 A, 786.
Mayer, P. 1886 A, 273, 274.
Meek, A. 1916 A, 41 (Hexanchidæ).
Osburn, R. C. 1907 A, 425.
Parker and Haswell 1897 A, 156.
Rauther, M. 1913 A, 1098.
Regan, C. T. 1906 A, 722, 741 (Hexanchidæ).
Ridewood, W. G. 1921 A, 313, 348, 394.
Schlosser, M. 1917 A, 137, 139, 141, 145 ("notidaniden").
Schmalhausen, J. J. 1913 A, 24.
Sewertzoff, A. N. 1923 A, 399 ("notidaniden").
1923 B.
Stromer, E. 1912 A, 19.
Tims, H. W. M. 1903 A, 133.
Versluys, J. 1922 B, 100 (Notidani).
Wallace, A. R. 1876 A, ii, 461.
Woodward, A. S. 1921 B, 37.
Zittel and Koken 1911 A, 49.
Zittel and Schlosser 1923 A, 54.
Zittel and Woodward 1902 A, 25.

HEPTRANCHIAS Rafinesque. Type *Squalus cinereus* Gmelin.

Hay, O. P. 1902 A, 300.
Allis, E. P. 1909 A, 202 (Heptanchus).
1913 A, 325 (Hexanchus, Heptanchus).
1914 A, 361 (Hexanchus, Heptanchus).
1915 A (Hexanchus, Heptanchus).
1919 C, 257 (Heptanchus).
1922 B, 261 (Heptanchus).
1923 A, 41 (Hexanchus, Heptanchus).
1923 B (Hexanchus, Heptanchus).
Ameghino, F. 1906 A, 186 (Notidanus).
Anthony, R. 1913 A, 243 (Hexanchus).
Baehr, W. B. 1906 A, 630 (Heptanchus, Hexanchus).
Bardeleben, K. 1906 A, 138 (Hexanchus).
Bassani, F. 1901 A, 175 (Notidanus).
Bassani, F. 1891 A, 42 (Notidanus).
1901 B, 175, pls. xxii-xxiv.
Beer, G. R. 1926 A, 276 (Heptanchus).
Braus, H. 1904 A, 393, 418, figs. 5, 10, 11, 13 (Heptanchus).
1906 A, 225 (Heptanchus).
1906 B, 545, fig. 1 (Heptanchus).
1907 A, 249 (Hexanchus, Heptanchus).
Bridge, T. W. 1904 A, 443, 748 (Notidanus).
Briquel, P. 1898 A, 13 (Heptanchus).
Bronn, H. G. 1848 B, 817 (Notidanus).
1849 A, 641 (Notidanus).
Carter, J. T. 1905 A, 133 (Heptanchus).
Chapman, F. 1918 A, 4 (Notidanus).
Collinge, W. E. 1894 A, 503 (Heptanchus).

Cope, E. D. 1891 N, 16, fig. 7 (Hexanchus).
Daniel, J. F. 1916 A, 349, pls. xxvii-xxix, text-figs. A-H (Heptanchus).
1922 A, many figures (Hexanchus, Heptanchus).
Davidoff, M. 1879 A (Heptanchus).
Dohrn, A. 1884 A, 142 (Hexanchus).
Drüner, L. 1906 A, 7 (Heptanchus).
Duméril, A. 1856 A, 123 ("griset").
Eastman, C. R. 1904 H, 77.
Edgeworth, F. H. 1925 A, 234.
1926 A, 177, 189, fig. 3 (Heptanchus, Hexanchus).
Eimer, G. H. T. 1901 A, 254 (Heptanchus).
Fahrenholz, C. 1915 A, 396, figs. 1-3 (Heptanchus).
Fowler, H. W. 1911 A, 24.
Frassetto, F. 1915 A, 45, figs. 26, 58 (Eptanchus).
Fürbringer, K. 1903 A, 361 (Heptanchus, Hexanchus).
1904 B, 465, figs. 11, 14, 15 (Heptanchus).
Garman, S. 1913 A, 21.
Gaupp, E. 1898 B, 811, 857 (Hexanchus, Heptanchus).
1905 D, 877, fig. 4 (Hexanchus, Heptanchus).
1913 A, 8, fig. 1 (Heptanchus).
Gegenbaur, C. 1870 C, 402 (Heptanchus).
1871 B, 497, pl. xiii (Hexanchus).
Gibian, A. 1912 A, 61 (Heptanchus).
Giebel, C. G. 1855 A, 115 (Notidanus).
Goodey, T. 1910 A, 545 (Heptanchus).
Goodrich, E. S. 1901 A, 312, fig. A (Heptanchus).
1909 A, 511, figs. (Heptanchus, Hexanchus, Notidanus).
Gregory, W. K. 1904 A, 55 (Notidanus); 64, pl. i, fig. 4 (Heptanchus).
Hanson, F. B. 1919 B, 45, fig. 1 (Hexanchus).
Haswell, W. A. 1885 B, 381, pl. x (Heptanchus).
Hawkes, O. A. M. 1905 A, 81 (Heptanchus, Hexanchus).
Hay, O. P. 1901 B, 67 (Hexanchus).
Heilprin, A. 1887 A, 297, 300 (Notidanus).
Hoffman, L. 1912 A, 280 (Hexanchus, Heptanchus).
Huber, O. 1901 A, 600, pl. xxvii (Hexanchus).
Huxley, T. H. 1876 E, 105 (Hexanchus, Heptanchus, Notidanus).
Imms, A. D. 1905 A, 44 (Heptanchus).
Jaekel, O. 1906 A, 9, fig. 1 (Heptanchus).
1911 A, 62, figs. 64-66 (Notorhynchus).
Jordan, D. S. 1905 A, I, 542; II, 574 (Heptranchias, Hexanchus).
1907 B, 185 (Heptranchias, Hexanchus).
1910 B, 181.
1917 A, 78.
1923 A, 97 (Hexanchus, Heptranchiás, Heptanchus).
Jordan and Evermann 1917 A, 78 (Heptranchias, Hexanchus).
Jordan and Gilbert 1882 A, 34, 62.
Jordan and Hannibal 1923 A, 32 (Heptranchias, Hexanchus, Notorhynchus).
Kiaer, J. 1924 A, 89 (Hexanchus, Heptanchus).
Kingsbury, B. F. 1926 A, 85, 105 (Heptanchus, Hexanchus).
Kingsley, J. S. 1894 A, 637 (Hexanchus).
Kingsley, J. S. 1896 A, 142 (Heptanchus).
1912 B, 65, fig. 64 (Heptanchias).
1925 A, 65, 87, 234, figs. 69, 90, 238, 247 (Heptanchus); 221 (Hexanchus).
Klaatsch, H. 1890 A, 110 (Hexanchus).
Krall, A. 108 A, 529 (Heptanchus, Hexanchus).
Lahille, F. 1913 A, 25, pls. viii, ix, text-figs. 1-3.
Lakjer, T. 1927 A, 278 (Notidanus).
Lawley, R. 1875 B, 57-76, pls. i-iv.
Leigh-Sharpe, W. H. 1926 A, 338 (Notidanus, Hexanchus).
Leriche, M. 1902 B, 101 (Notidanus).
1905 A, 110.
1906 C, 418 (Notidanus).
1910 D, 254, fig. 70 (Notidanus).
Leunis and Ludwig 1883 A, 786 (Notidanus).
Leydig, F. 1852 A, 1.
Luther, A. 1909 A, 10, fig. 6 (Heptanchus).
Miklouho-Maclay, N. 1879 A, 321 (Notidanus).
Miner, R. W. 1925 A, 195 (Hexanchus, Heptanchus).
Mivart, St. G. 1878 B, 311, 331 (Notidanus).
Müller and Henle 1837 A, 398 (Hexanchus, Heptanchus).
1838 A, 88 (Notidanus).
Norman, E. W. 1926 A, 441, fig. 55 (Heptanchus).
Osburn, R. C. 1907 A, 421 (Heptanchus).
1907 B, 182 (Notidanus).
Owen, R. 1845 B, 29 (Notidanus).
1848 B, 96 (Heptanchus).
1866 A, 37 (Heptanchus).
Parker and Bettany 1877 A, 89 (Notidanus).
Parker and Haswell 1897 A, 161, fig. 789 (Hexanchus).
Pompeckj, J. F. 1913 A, 1124 (Heptanchus, Hexanchus).
Priem, F. 1908 B, 25, 94 (Notidanus).
Probst, J. 1886 B, 303 (Hexanchus, Heptanchus).
Rabinerson, A. 1925 A, 560, fig. 1 (Heptanchus).
Rabl, C. 1892 A, 106 (Hexanchus).
1901 A, 477, figs. 4, 17 (Heptanchus).
Rauther, M. 1913 A, 1063, figs. 7, 11 (Heptanchus).
Regan, C. T. 1906 A, 722 (Hexanchus, Heptranchias).
Reis, O. M. 1893 A, 501 (Notidanus).
Reynolds, S. H. 1897 A, 31, 63, 114, 121, fig. 17 (Heptanchus); 31, 63, 121 (Hexanchus).
Ridewood, W. G. 1895 B, 429 (Notidanus).
1896 A, 382, fig. 3 (Notidanus).
1899 A, 49 (Heptanchus).
1921 A, 326, 348, 394, figs. 5, 6 (Hexanchus).
Roth, W. 1911 A, 531 (Hexanchus, Heptanchus).
Sagemehl, M. 1884 A, 100 (Heptanchus).
Sauvage, E. 1867 A, 118 (Notidanus).
Schmalhausen, J. J. 1912 A, 580 (Heptanchus).
Secerov, S. 1911 A, 8, pl. i (Heptanchus).
Semon, R. 1901 B, 132 (Heptanchus).
Sewertzoff, A. N. 1923 B, fig. 2 (Heptanchus, Hexanchus).
1926 B, 577 (Heptanchus).
Smith, H. M. 1916 A, 349, fig. (Hexanchus).
Steinhard, O. 1903 A, 6 (Heptanchus).
Stensiö, E. A. 1925 A, 70, 127 (Heptanchus).
1925 B, 140 (Heptranchus).

Stromer, E. 1925 A, 19 (Hexanchus, Heptanchus).
VanWijhe, J. W. 1905 B, 320 (Heptanchus).
Versluys, J. 1922 B, figs. 1, 4, 5, 7 (Heptranchus, Hexanchus).
White, P. J. 1895 B, 222, figs. 1, 2.
1905 A, 320 (Heptanchus).
Winckler, T. C. 1876 A, 12 (Notidanus).
Woodward, A. S. 1889 I, 6 (Notidanus).
1891 E, 65 (Notidanus).
1912 A (1911), 222 (Notidanus).
1915 B, lxix.
1921 A, 179 (Notidanus).
Zittel and Koken 1911 A, 49 (Notidanus).
Zittel and Schlosser 1923 A, 54, figs. 29, 59, 73, 74 (Notidanus).
Zittel and Woodward 1902 A, 25 (Notidanus).

Heptranchias andersoni Jordan.

Jordan, D. S. 1907 A, 101, fig. 3.
Anderson, F. M. 1911 A, 101.
Jordan, D. S. 1907 A, 102, 119, fig. 4*d* (Chiloscyllium sp.).
1910 B, 181.
Jordan and Beal 1913 A, 246 (H. andersoni); 246, 253, fig. *b* (Squatina lerichei).
Jordan and Gilbert 1919 A, 23 (Squatina lerichei).
Jordan and Hannibal 1923 A, 34, 62, pl. ii, figs. *x-z; dd, ee.*
Leriche, M. 1908 C, 303 (Notidanus primigenius); 305 ("Squatina").
Miocene; California.

NOTIDANION Jordan and Hannibal. Type *Notidanus primigenius* Agassiz.

Jordan and Hannibal in Jordan, D. S. 1923 A, 97.
Jordan and Hannibal 1923 A, 34.

Notidanion boreale Jordan and Hannibal.

Jordan and Hannibal 1923 A, 34, 61, pl. ii, fig. *g*.
Oligocene (San Lorenzo); Washington.

Notidanion primigenium (Agassiz).

Hay, O. P. 1902 A, 300 (Heptranchius? primigenius, H?. plectrodon).
Bassani, F. 1891 A, 43, pl. ii, figs. 21, 22 (Notidanus).
1901 A, 178 (Notidanus).
Chapman, F. 1918 A, 5, pl. vi, fig. 6 (Notidanus).
Eastman, C. R. 1904 H, 77, pl. xxix, fig. 6 (Notidanus, N. plectrodon a syn.).
Fowler, H. W. 1911 A, 24, fig. 1 (Heptranchias).
Gervais, P. 1852 A, explan. pl. lxxiv (Notidanus).
Gervais, P. 1859 A, 520, pl. lxxiv, figs. 9, 10 (Notidanus).
Jaekel, O. 1895 E, 33, pl. ii, fig. 22 (Notidanus).
Jordan, D. S. 1910 B, 181 (Notidanus).
1923 A, 97 ("Notidanion").
Jordan and Hannibal 1923 A, 36.
Lawley, R. 1875 B, 66, pl. i, figs. 1, 5 (Notidanus).
Leriche M. 1905 A, 207, fig. 62 (Notidanus).
1906 A, 296 (Notidanus).
1906 B, 352 (Notidanus).
1906 C, 420, fig. 71 (Notidanus).
1910 D, 257, pl. xiii, text-figs. 71, 72.
Priem, F. 1906 A, 196, pl. viii, figs. 1, 2 (Notidanus).
1912 A, 217, 225, pl. vi, fig. 34, text-figs. 17-19 (Notidanus).
1914 A, 121, pl. iii, fig. 11 (Notidanus).
Shattuck, G. B. 1904 A, xcvi (Heptranchias).
Woodward, A. S. 1889 I, 6 (Notidanus).
Zierler, F. E. 1905 A, 511 (Heptranchias).
Miocene; New Jersey: Miocene (Calvert); Maryland: Eocene?; New Jersey: Upper Eocene and Miocene; Europe.

GYROPLEURODUS Gill. Type *Cestracion francisci* Girard.

Gill, T. 1862, Proc. Acad. Nat. Sci. Phila., 469.
Jordan, D. S. 1919 B, 317.
Jordan and Evermann 1896 A, 20.
Jordan and Gilbert 1882 A, 32 (Gyropleurodus); 875 (Heterodontus).
Jordan and Hannibal 1923 A, 32.
Regan, C. T. 1908 D, 494.

Gyropleurodus francisci (Girard).

Girard, C. F. 1854, Proc. Acad. Nat. Sci. Phila., 196 (Cestracion).
Gill, T. 1862, Proc. Acad. Nat. Sci. Phila., 492.
Günther, A. C. 1870 A, 416 (Cestracion).
Jordan and Evermann 1896 A, 20.
Jordan and Gilbert 1883 A, 31.
Jordan and Hannibal 1923 A, 32, pl. iv, fig. *j*.
Miklouho-Maclay and Macleay 1879 A, p. 315, pl. xxvi (Heterodontus).
Recent; Coast of California: Pleistocene or Recent?; California.

STRONGYLISCUS Jordan. Type *S. robustus* Jordan.

Jordan, D. S. 1925 B, 7.

Strongyliscus robustus Jordan.

Jordan, D. S. 1925 B, 7, pl. iv.
Miocene (Monterey); California.

LAMNOIDÆ, new form.

Hay, O. P. 1902 A, 301 (Galeoidea, in part).
Garman, S. 1913 A, 10 (Carcharoidei, Isuroidei).
Gill, T. 1873 F, 12 (Lamnoidea).
Jordan, D. S. 1923 A, 99 (Lamnoidei).
Regan, C. T. 1906 A, 723 (Galeoidei, in part)

CARCHARIIDÆ Jordan and Gilbert.

Jordan and Gilbert 1882 A, 27 (Carchariidæ); 62 (Odontaspididæ).
Hay, O. P. 1902 A, 301 (Carchariinæ).
Allis, E. P. 1923 B, 144.
1926 B, 338.
Arldt, T. 1923 A, 484 ("odontaspiden").
Garman, S. 1913 A, 23 (Carcharidæ).
Gill, T. 1872 C, 24 (Odontaspididæ).
1905 A, 658 (Odontaspididæ, Carchariidæ).
Gregory, W. K. 1907 D, 447.
Hussakof, L. 1909 A, 262 (Odontaspididæ).
Jordan, D. S. 1905 A, i, 534 (Odontaspididæ).
1907 B, 191, 758 (Odontaspididæ).
1923 A, 99 (Carchariidae, Odontaspidæ).
Jordan and Hannibal 1923 A, 45.
Leigh-Sharpe, W. H. 1926 A, 315, 339.
Radcliffe L. 1916 A, 243, 244.
Regan, C. T. 1906 A, 723, 741, 744 (Odontaspididæ).
Ridewood, W. G. 1921 A, 351, 355, 395 (Odontaspididæ).

ODONTASPIS Agassiz. Type *O. ferox* Agassiz.

Hay, O. P. 1902 A, 301 (Carcharias).
Abel, O. 1919 A, 121, 123, figs. 79, 82.
Agassiz, L. 1874 A, 130.
Ameghino, F. 1906 A, 186.
Braus H. 1901 B, 191.
Bridge, T. W. 1904 A, 451.
Bronn, H. G. 1848 A, 218 (Carcharias).
1848 B, 835.
1849 A, 642; 645 (Carcharias).
Chapman, F. 1918 A, 10.
Coulon, L. 1903 A 124.
Cunningham, J. T. 1897 A, 496 (Carcharias).
Daniel, J. F. 1922 A, figs. 14, 127.
Deinse, A. B. 1916 A, 448.
Dollo, L. 1904 C, 48.
Duméril A. 1856 A, 132.
Eastman C. R. 1902 B, 56 (Carcharias).
1904 H, 78, 79.
Fürbringer, K. 1903 A, 399.
Garman, S. 1913 A, 3, 23 (Carcharias).
Gaupp, E. 1898 B, 816, 862 (Carcharias).
1905 D, 874.
Gibian A. 1912 A, 61.
Giebel, C. G. 1855 A, 116.
Gill, T. 1905 A, 658.
Hussakof, L. 1909 A, 259 (Carcharias).
Ishiwara, Y. 1921 A, 69, 74 (Carcharias).
Jacobshagen, E. 1920 A, 92 (Carcharias).
1923 A, 176 (Carcharias).
Jaekel, O. 1895 E, 29.
Jordan, D. S. 1905 A, ii, 534.
1907 B, 191, 199.
1919 B, 184 (Odontaspis a syn.).
1923 A, 99, 100 (Carcharias).
1928 A, 1 (Carcharias).
Jordan and Beal 1913 A, 249 (Carcharias).
Jordan and Evermann 1917 A, 77, 97 (Carcharias).
Jordan and Gilbert 1882 A, 27 (Carcharias).
Jordan and Hannibal 1923 A, 45.
Leigh-Sharpe, W. H. 1926 A, 340.
Leriche, M. 1905 A, 115.
Meek, A. 1916 A, 38 (Carcharias).
Owen, R. 1845 B, 28.
Priem, F. 1907 B, 413.
1908 B, 77, 95, 122, fig. 60.
Radcliffe, L. 1916 A, 243, fig. 1 (Carcharias).
Regan, C. T. 1906 A, 723.
Reynolds, S. H. 1897 A, 107, fig. 14.
Roth, W. 1911 A, 540, pls. vi, viii.
Schlesinger, G. 1909 A, 142 (Carcharias).
Schmalhausen, J. J. 1913 A, 21 (Carcharias).
Stefano, G. 1912 A, 378.
Stromer, E. 1905 C, 169.
Weiler, W. 1922 A, 88.
Woodward, A. S. 1889 I, 7.
1898 B, 48.
Zittel and Koken 1911 A, 52.
Zittel and Schlosser 1923 A, 57.

Odontaspis clavata (Agassiz).

Hay, O. P. 1902 A, 302 (Lamna).
Anderson, F. M. 1911 A, 101 (Lamna).
Blake, W. P. 1857 A, 172 (Lamna).
1866 A, 290 (Lamna).
Jordan, D. S. 1907 A, 106, fig. 8 (Lamna).
1910 B, 181 (Lamna).
Jordan and Beal 1913 A, 245, 249 (Carcharias).
Jordan and Gilbert 1919 A, 21 (Carcharias).
Jordan and Hannibal 1923 A, 46, 62, pl. ii, figs. *a*, *h*. (Carcharias).
Leriche, M. 1908 C, 303 (O. cuspidata).
Miocene (Monterey); California.

Odontaspis contortidens (Agassiz).

Agassiz, L. 1843 B, 294, pl. xxxvii, figs. 17-23 (Lamna contortidens); figs. 33, 34 (L. acutissima).
Hay, O. P. 1902 A, 301 (Carcharias).
Agassiz, L. 1854 A, 4 (Lamna, Odontaspis).
Chapman, F. 1918 A, 11, 31, text-fig. 1 (Carcharias).
Coulon, L. 1903 A, 125.
Jaekel, O. 1895 E, 31, pl. ii, figs. 11-18 (Carcharias).
Leriche, M. 1900 A, 192.
1906 C, 413.
1907 B, 341 (O. acutissima).
1910 D, 261, pl. xiv, figs. 1-27, text-figs. 73-76 (O. acutissima).
Newton, E. T. 1891 A, 107, pl. ix, figs. 17*a*, 17*b* (Carcharias).
Priem, F. 1912 A, 214, 218, 226, 238, pl. iv, figs. 18-25.
Stefano, G. 1901 A, 556, pl. x, figs. 9-12 (Carcharias).
1912 A, 389 (Carcharias).
Eocene to Pliocene; Europe: Eocene?; Alabama, South Carolina.

Odontaspis cuspidata (Agassiz).

Hay, O. P. 1902 A, 302 (Lamna).
Ameghino, F. 1906 A, 177, 259; pl. i, fig. 9.
1908 B, 492.

Bassani, F. 1891 A, 25, pl. i, fig. 14; pl. ii, figs. 10, 13, 16, 17.
Berry, E. W. 1916 A, 351, pl. viii, figs. 8, 9 (Lamna).
Chapman, F. 1918 A, 12.
Clark and Miller 1912 A, 117, 118.
Coulon, L. 1903 A, 122 (Carcharias).
Dall, W. H. 1894 A, 297 (Lamna).
Eastman, C. R. 1901 B, 105; pl. xiv, figs. 1*a*, 1*b*, 6*a*, 6*b*.
1904 H, 78; pl. xxx, fig. 1.
Fowler, H. W. 1911 A, 43; figs. 12-15 (Lamna).
Hay, O. P. 1922 B, 3 (Lamna).
Ishiwara, Y. 1921 A, 70, pl. xii, figs. 12-21 (Carcharias).
Jordan, D. S. 1910 B, 181 (Carcharias).
Jordan and Beal 1913 A, 249.
Leriche, M. 1902 A, 22.
1906 C, 413 (Lamna, Odontaspis).
1910 B, 328, pl. iii, figs. 9-12.
1910 D, 268, pl. xv, figs. 1-21.
1913 A, 83.
1926 A, 15.
Lyell, C. 1845 C, 549, 560 (Lamna).
Priem, F. 1908 B, 78.
1911 B, 330, 336.
1912 A, 214, 217, 226, 237; pl. vi, figs. 10-17.
Sellards, E. H. pl. vii, figs. 1-5, 7, 9 ("shark").
Shattuck, G. B. 1904 A, xcvi (Carcharias).
Stanton, T. W. 1920 A, 49, pl. ix. figs. 12, 13 (Lamna).
Stefano, G. 1912 A, 389, pls. xiii, xiv.
1912 B, 46, pls. i, ii.
Stromer, E. 1905 C, 171, 178; pl. xv, figs. 26, 27.
Weiler, W. 1922 A, 88, 104.
Woodward, A. S. 1889 I, 7, figs. 12-14.
Zittel and Schlosser 1923 A, 57, fig. 85 (Lamna).
Upper Cretaceous (Manasquan, etc.); New Jersey: (Lance); South Dakota: (Matawan, Monmouth); Maryland: Eocene, New Jersey: Eocene (Nanjemoy, Acqua); Maryland; Miocene (Calvert); Maryland: Miocene (Kirkwood); New Jersey: Miocene (Chesapeake); Massachusetts: Eocene, Miocene; Europe.

Odontaspis cuspidata hopei (Agassiz).

Hay, O. P. 1902 A, 302 (Lamna cuspidata, part).
Coulon, L. 1903 A, 123 (Lamna hopei).
Leriche, M. 1900 A, 192.
1905 A, 75, 119, 187, 208, 215.
1906 B, 350, 351, 352, 355.
1906 C, 416 (O. hopei).
1907 A, 354, pl. iii, fig. 4.
1908 A, 238, pl. iv, figs. 1-12.
Priem, F. 1906 A, 197; pl. viii, figs. 3-10.
Stefano, G. 1912 A, 384, pls. xii, xiv.
1912 B, 45, pls. i, ii.
Stromer, E. 1905 C, 171, 178 (O. hopei).
Woodward, A. S. 1889 I, 7 (This species?).
Eocene; Europe, Georgia, Alabama, Virginia, Kansas, S. Carolina: Miocene; Maryland, N. Carolina.

Odontaspis duplex Agassiz.

Hay, O. P. 1902 A, 302 (Carcharias).
Tertiary of Alabama?

Odontaspis elegans (Agassiz).

Hay, O. P. 1902 A, 303 (Lamna).
Ameghino, F. 1906 A, 185, 259, 463.
Berry, E. W. 1916 A, 350, pl. viii, figs. 5-7 (Lamna).
Chapman, F. 1918 A, 11, pl. iii, fig. 1.
Clark and Miller 1912 A, 117, 118 (Carcharias).
Coulon, L. 1903 A, 123 (Lamna).
Eastman, C. R. 1901 B, 104; pl. xiv, figs. 2*a*, 2*b*, 2*c*, 3*a*, 3*b*, 3*c*.
1904 H, 79; pl. xxx, figs. 2, 3.
Fowler, H. W. 1911 A, 48; figs. 16, 17 (Lamna).
Gervais, P. 1852 A, explan. pl. lxxv, fig. 3 (Lamna).
1859 A, 520, pl. lxxv, fig. 3 (Lamna).
Giebel, C. G. 1855 A, 116, pl. xlvii, fig. 16 (Lamna).
Hopkins, F. V. 1871 A, 13 (Lamna).
Humphreys, J. 1908 A, 14, pl. i, fig. 2.
Jordan and Hannibal 1923 A, 46.
Leriche, M. 1900 A, 191.
1902 A, 21 (= Otodus macrotus).
1906 C, 414.
Mantell, G. A. 1844 A, 624, fig. 130 (Lamna).
Miller, B. L. 1911 A, 103.
1912 A, 2.
Newton, E. T. 1891 A, 107, pl. ix, figs. 16*a*, 16*b*.
Priem, F. 1896 B, 13 (Lamna).
1901 A, 483, pl. xi, figs. 27, 28.
1908 B, 78.
Ridewood, W. G. 1896 A, 382, fig. 4.
Rutot, A. 1875 A, 34 (Lamna).
Shattuck, G. B. 1904 A, xcvi.
Shattuck, Miller, and Bibbins 1907 A, 5.
Stromer, E. 1905 C, 170 (Lamna).
Winckler, T. C. 1876 A, 9 (Lamna).
Woodward, A. S. 1889 I, 8, pl. i, figs. 15-17.
Upper Cretaceous (Matawan, Monmouth); New Jersey; Eocene; Louisiana; Eocene (Aquia); Virginia, Maryland: Miocene; New Jersey: Miocene (Calvert); Maryland.

Odontaspis littoralis (Mitchill).

Mitchill, S. L. 1818, Amer. Monthly Mag., ii, 328 (Squalus).
Jordan and Evermann 1896 A, 46 (Carcharias).
Jordan and Gilbert 1882 A, 874.
Leriche, M. 1906 C, 207 (Odontaspis americanus).
Mitchill, S. L. 1815 A, 483 (Squalus americanus; not of Shaw).
Said by Mitchill (op. cit., 1818) to be met with in digging wells in Richmond and as far up as Alexandria, Virginia.

Odontaspis lomitæ (Jordan and Hannibal).

Jordan and Hannibal 1923 A, 48, 63, pl. vi, figs. *i*, *c* (Carcharias).
Hay, O. P. 1927 D, 174 (Carcharias).
Pliocene or Pleistocene (Lomita); California.

Odontaspis macrota (Agassiz).

Hay, O. P. 1902 A, 305 (Otodus).
Chapman, F. 1918 A, 15, pl. iii, figs. 8, 9; pl. ix, figs. 6, 7 (Lamna compressa).

Dollo, L. 1914 A, 290.
Eastman C. R. 1901 B, 105, pl. xiv, figs. 4a, 4b.
Leriche, M. 1901 A, 156, pl. v, figs. 13-15.
1902 A, 11, 19.
1905 A, 75, 120, 187, 200, 208, 215.
1906 B, 350, 355.
1906 C, 417 (Odontaspis); 418 (Otodus).
1908 A, 242.
1913 A, 78, pl. x, fig. 2.
1926 A, 15.
Priem, F. 1906 A, 198 (Lamna).
1908 B, 79, pl. iv, fig. 7 (Lamna).
Stefano, G. 1912 A, 376, pls. xiii, xiv (Lamna. This species?).
Stromer, E. 1903 A, 32, pl. i, fig. 8 (Lamna).
1905 C, 171 (Lamna).
Winckler, T. C. 1876 A, 9.
Woodward, A. S. 1889 I, 8, pl. i, figs. 19, 20 (Lamna).
Eocene (Nanjimoy and Aquia); Maryland: (Nanjimoy); Virginia: Europe.

Odontaspis morricei (Jordan and Beal).

Jordan and Beal 1913 A, 245, 249, fig. *c*. (Carcharias).
Jordan and Gilbert 1919 A, 21 (Carcharias).
Jordan and Hannibal 1923 A, 43, 62, pl. ii, fig. *t;* pl. iv, figs. *a, b, e;* pl. vi, fig. *h* (Xiphodolamia).
Miocene (Monterey); California.

Odontaspis sanctæ-crucis (Jordan and Hannibal).

Jordan and Hannibal 1923 A, 48, 62, pl. iii, figs. *d, k* (Carcharias?).
Miocene (Monterey); California.

Odontaspis verticalis (Agassiz).

Hay, O. P. 1902 A, 302 (Carcharias).
Coulon, L. 1903 A, 122 (Lamna).
Leriche, M. 1900 A, 192.
1902 A, 33 (Lamna).
1905 A, 75, 121, 188, 200, pl. vi, figs. 20-35 (Lamna).
1906 B, 350, 352, 355.
1906 C, 423, pl. ix, figs. 20-35 (Lamna).
1908 A, 238 (Lamna, Odontaspis).
Priem, F. 1908 B, 79 (Lamna).
Stromer, E. 1903 A, 31, pl. i, figs. 10, 11 (Odontaspis).
Eocene; Europe, Egypt: Eocene; South Carolina, Alabama.

Odontaspis virgatula (Jordan and Hannibal).

Jordan and Hannibal 1923 A, 46, 63, pl. iii, figs. *t, u* (Carcharias).
Hay, O. P. 1927 D, 174 (Carcharias).
Pliocene or Pleistocene (Lomita); California.

Odontaspis sp. indet.

Dumble, E. T. 1920 A, 175 (Odontaspis). Eocene (Jackson); Texas.
Gidley, J. W. 1927 E, 274 (Carcharias). Pleistocene; Florida.
Hay, O. P. 1927 D, 274 (Carcharias). Pleistocene; Florida.
Jordan, D. S. 1907 A, 104, fig. 5 (Carcharias). Miocene; California.
Sellards, E. H. 1915 D, 98, fig. 26 (Carcharias). Pliocene (Bone Valley); Florida.

MITSUKURINIDÆ Jordan.

Jordan, D. S. 1898, Proc. Calif. Acad. Sci. (3), No. 6, 201.
Jordan, D. S. 1923 A, 99.

Scapanorhynchus A. S. Woodward. Type *S. lewisii* Davis.

Woodward, A. S. 1889 D, 351 (To replace *Rhinognathus* Davis, preoccupied).
Ameghino, F. 1906 A, 186.
Arldt, T. 1923 A, 484.
Chapman, F. 1918 A, 8.
Garman, S. 1913 A, 23, 28.
Hussakof, L. 1909 A, 257.
Jordan, D. S. 1898, Proc. Calif. Acad. Sci. (3), Zool. vol. i, No. 6 (Mitsukurina).
1920 C, 449.
1923 A, 99.
Leriche, M. 1902 A, 11.
1902 B, 103.
1906 C, 421.
Priem, F. 1896 B, 13, pl. ii, figs. 1-6.
1908 B, 39, fig. 15.
Ridewood, W. G. 1921 A, 359, fig. 12.
Woodward, A. S. 1889 D, 351.
1899 E, 487.
1912 A (1911) 210.
1921 A, 180.
Zittel and Schlosser 1923 A, 57 (Mitsukurina a syn.).

Scapanorhynchus rhaphiodon (Agassiz).

Hay, O. P. 1902 A, 303 (Lamna).
Chapman, F. 1918 A, 10, pl. iii, figs. 2, 16.
Coulon, L. 1903 A, 124 (Odontaspis).
Fritsch, A. 1878 A, 10, text-fig. 17 (Lamna).
Hennig, E. 1914 A, 308, pl. xxiii, fig. 7 (S. raphiodon).
Leriche, M. 1902 B, 106, pl. iii, figs. 8-13.
1906 C, 421.
Priem, F. 1896 B, 15, pl. ii, figs. 1-6.
1907 A, 463.
1912 B, 258, 267.
1913 A, 160.
1914 C, 366, pl. x, figs. 8-10.
Sauvage, E. 1867 A, 122 (Lamna).
Tanner, V. M. 1925 A, 6, pl. i, figs. 1, 2.
Woodward, A. S. 1889 D, 353.
1912 A (1911), 211, pl. xliv, figs. 14-17.
Cretaceous; Europe, India: Tertiary of Alabama?

Scapanorhynchus subulatus (Agassiz).

Hay, O. P. 1902 A, 303 (Lamna).
Ameghino, F. 1906 A, 177, pl. i, fig. 7.
1908 B, 487.
Chapman, F. 1918 A, 8, 31, pl. iii, fig. 13; pl. v, figs. 6-10.
Coulon, L. 1903 A, 125 (Odontaspis).
Fritsch, A. 1878 A, 9, text-figs. 15, 16 (Lamna).
Leriche, M. 1902 B, 107, pl. iii, figs. 5-7.
1906 C, 422.
Priem, F. 1896 B, 15, pl. ii, figs. 7-10.
1907 A, 463, 464.
1912 B, 258, 267.
1913 A, 160.
Woodward, A. S. 1889 D, 386 (This genus?).
1912 A (1911), 212, pl. xliv, figs. 18-21.
Miocene?; Maryland?.

LAMNIDÆ Richardson.

Richardson, J. 1846 A, 195.
Hay, O. P. 1902 A, 301.
Allis, E. P. 1913 A (Carchariidæ).
Arldt, T. 1907 D, 184, 283.
Bassani, F. 1891 A, 13.
Bonaparte, C. L. 1840 A, 46 (Lamnini).
Bridge, T. W. 1904 A, 450.
Bronn, H. G. 1849 A, 781, seq. (Lamnoidei).
Chapman, F. 1918 A, 8.
Cope, E. D. 1891 N, 17.
Cunningham, J. T. 1912 A, 246.
Deinse, A. B. 1916 A, 446.
Dollo, L. 1889 F, 342.
1904 C, 48.
Fitzinger, L. J. 1873 A, 55 (Lamnæ).
Fowler, H. W. 1911 A, 31.
Garman, S. 1913 A, 31 (Isuridæ).
Gaupp, E. 1905 D, 894 ("lamniden").
Goodrich, E. S. 1909 A, 149.
Gregory, W. K. 1907 D, 447.
Hay, O. P. 1901 B, 67.
Hoernes, R. 1886 A, 541.
Huber, O. 1901 A, 617.
Jacobshagen, E. 1923 A, 176 ("lamniden").
Jaekel, O. 1895 E, 22.
Jordan, D. S. 1905 A, I, 537; II, 578.
1907 B, 194, 758.
1923 A, 99.
Jordan and Gilbert 1882 A, 28.
Jordan and Hannibal 1923 A, 45, 48.
Kingsley, J. S. 1885 A, 79.
Leigh-Sharpe, W. H. 1926 A, 340.
Leriche, M. 1902 B, 103.
1906 C, 273.
Leunis and Ludwig 1883 A, 784.
Mayer, P. 1886 A, 277 ("lamniden").
Müller and Henley 1838 A, 36 (Lamnoidea).
Priem, F. 1908 B, 25 ("lamnidés").
Radcliffe, L. 1916 A, 247 (Isuridæ).
Rauther, M. 1913 A, 1098.
Regan, C. T. 1906 A, 723, 741, 744.
Ridewood, W. G. 1895 B, 429.
1921 A, 355, 395.
Roth, W. 1911 A, 538-543.
Schlosser, M. 1917 A, 136, 139, 141 ("lamniden").
Schmalhausen, J. J. 1913 A, 25.
Steinmann, G. 1907 A, 401.
Stromer, E. 1905 C, 167, 179.
1912 A, 19.
Tomes, C. S. 1898 B, 443.
Wallace, A. R. 1876 A, ii, 460.
Weiler, W. 1922 A, 88, 104.
Woodward, A. S. 1889 I, 7.
1891 E, 62.
1916 A, lxxiv ("lamnid sharks")
1921 B, 38.
Zittel and Koken 1911 A, 51.
Zittel and Schlosser 1923 A, 57.

LAMNINÆ Gill.

Gill, T. 1862 A, 368.
Hay, O. P. 1902 A, 302.
Goodrich, E. S. 1909 A, 150.

LAMNA Cuvier. Type *Squalus cornubicus* Gmelin.

Hay, O. P. 1902 A, 302.
Abel, O. 1909 D (225).
1912 F, 422, 517.
1915 A, 415.
1920 A, 327, fig. 518.
Agassiz, L. 1835 G, 187.
Ameghino, F. 1906 A, 186.
Arldt, T. 1923 A, 484.
Bassani, F. 1891 A, 22.
Braus, H. 1906 A, 186, fig. 187.
Bridge, T. W. 1904 A, 451.
Bronn, H. G. 1848 A, 625.
1849 A, 643.
Chapman, F. 1918 A, 13.
Coulon, L. 1903 A, 122.
Daniel, J. F. 1922 A, 101, fig. 98.
Darton, N. H. 1908 A, 457.
Deinse, A. B. 1916 A, 442.
Dollo, L. 1904 C, 48.
Duméril, A. 1856 A, 124 ("lamie").
Eastman, C. R. 1901 B, 103 (Odontaspis).
Fowler, H. W. 1911 A, 42.
Garman, S. 1913 A, 34.
Giebel, C. G. 1855 A, 116.
Goodrich, E. S. 1906 A, 345.
1909 A, 511, figs.
Haswell, W. A. 1884 A, 84.
Hay, O. P. 1901 B, 67.
Heilprin, A. 1887 A, 297, 300.
Huber, O. 1901 A, 617, pl. xxvii.
Jacobshagen, E. 1923 A, 176.
Jordan, D. S. 1905 A, i, 534, 538.
1907 B, 194.
1917 A, 97.
1923 A, 99.
Jordan and Beal 1913 A, 249.
Jordan and Evermann 1917 A, 97 ("Type *Squalus cornubicus* Bloch and Schneider").
Jordan and Gilbert 1882 A, 29.
Jordan and Hannibal 1923 A, 48, 50.
Klaatsch, H. 1890 A, 121.
Leigh-Sharpe, W. H. 1921 A, 367, figs. 5-7.

Leriche, M. 1906 C, 416 (Lamna); 419 (Odontaspis).
Leunis and Ludwig 1883 A, 784.
Mantell, G. A. 1844 A, 623.
Müller and Henle 1838 A, 36.
Osburn, R. C. 1907 B, 182.
Owen, R. 1839 G, 211.
1845 B, 24, 26, 28, pl. v, fig. 1.
1868 A, 888.
Priem, F. 1896 B, 13.
1908 B, 41, 78.
Probst, J. 1886 B, 312.
Ridewood, W. G. 1896 A, 382, fig. 2.
1921 A, 355, fig. 9.
Roth, W. 1911 A, 538, pl. vii.
Sauvage, E. 1867 A, 120.
Schmalhausen, J. J. 1913 A, 21.
Stannius, H. 1854 A.
Stephan, P. 1900 A, 327.
Stefano, G. 1912 A, 370.
Stromer, E. 1905 C, 169.
Terra, P. 1911 A, 200, fig. 48.
Tomes, C. S. 1898 B, 444, 447, pl. xvii.
1898 C, 345.
Weidenreich, F. 1926 A, 46.
Weiler, W. 1922 A, 88.
Woodward, A. S. 1889 I, 10.
1912 A (1911), 206.
Zittel and Koken 1911 A, 52.
Zittel and Schlosser 1923 A, 57, figs. 85-88.

Lamna appendiculata Agassiz.

Hay, O. P. 1902 A, 304 (Otodus).
Ameghino, F. 1906 A, 71, 178, pl. i, fig. 12.
1908 B, 491.
Chapman, F. 1918 A, 11, 14, text-figs. 2.
Coulon, L. 1903 A, 126 (Otodus).
Dollo, L. 1914 A, 290.
Fowler, H. W. 1911 A, 54, figs. 20, 21 (Otodus).
Fritsch, A. 1878 A, 5, text-figs. 5, 42 (Otodus).
Gervais, P. 1852 A, explan. pl. lxxvi (Lamna acuminata, Corax appendiculatus).
1859 A, 524, pl. lxxvi (Lamna acuminata, Corax appendiculatus).
Gidley, J. W. 1926 E, 16 (Otodus).
Gorjanovič-Kramberger, D. 1891 A, 92, pl. viii, fig. 16.
Hopkins, F. V. 1871 A, 13 (Otodus).
Jordan and Beal 1913 A, 246, 250.
Jordan and Hannibal 1923 A, 46.
Lambe, L. M. 1904 C, 25, 37, 41.
Leriche, M. 1902 A, 11.
1902 B, 111, pl. iii, figs. 28-38.
1906 B, 348, 350.
1906 C, 411.
1913 A. 78, pl. x, figs. 3-5.
Lyell, C. 1844 A, 303.
Priem, F. 1896 B, 14, pl. i, figs. 5-9.
1907 A, 463, 464, figs. 2, 5.
1908 B, 47, 69, pl. i, fig. 19, text-figs. 27, 28.
1912 B, 259, 268.
1913 A, 160.
1914 C, 366, pl. x, fig. 11.
Sauvage, E. 1867 A, 120 (Otodus).
Spillman, W. 1863 A (Otodus).
Stephenson, L. W. 1912 A, 127, 128, 130, 136, 138, 148, 149 (Otodus).
Tanner, V. M. 1925 A, 6, pl. i, fig. 3.
Upham, W. 1888 A, 603 (Otodus).
Woodward, A. S. 1912 A (1911), 206, pl. xliv, figs. 3-7, text-figs. 63, 64.
Zittel and Schlosser 1923 A, 57, fig. 86.
Upper Cretaceous; California, British Columbia, New Jersey, North Carolina, Minnesota, Iowa: Eocene; Louisiana: Miocene; New Jersey.

Lamna caurina Jordan and Hannibal.

Jordan and Hannibal 1923 A, 50, 61, pl. iii, figs. *o, s.*
Oligocene (Lorenzo); Washington.

Lamna crassidens Agassiz.

Hay, O. P. 1902 A, 302.
Coulon, L. 1903 A, 123.
Leriche, M. 1902 A, 32 (Odontaspis).
1905 A, 75, 120, 187, 200, 208, pl. vi, figs. 13-19 (Odontaspis).
1906 C, 413, pl. ix, figs. 13-19 (Lamna).
Eocene and Miocene; Europe: Miocene; Virginia.

Lamna gracilis Agassiz.

Hay, O. P. 1902 A, 303.
Leriche, M. 1902 B, 108, pl. iii, fig. 14 (Scapanorhynchus).
Sauvage, E. 1867 A, 120.
Cretaceous; Europe: Eocene; South Carolina.

Lamna macrorhiza Cope.

Hay, O. P. 1902 A, 303.
Coulon, L. 1903 A, 125 (Odontaspis).
Hussakof, L. 1908 A, 31.
Leriche, M. 1902 B, 109, pl. iii, figs. 18-27 (Odontaspis).
1906 B, 348 (Odontaspis).
1910 A, 459 (Odontaspis).
Priem, F. 1907 C, 49 (Scapanorhynchus).
1908 B, 41, fig. 16 (Scapanorhynchus).
1912 B, 259 (Scapanorhynchus).
Upper Cretaceous (Niobrara); Texas or Kansas?: Cenomanian, Senonian; France.

Lamna manitobensis Whiteaves.

Hay, O. P. 1902 A, 303.
Lambe, L. M. 1904 C, 21, 36, 41.
Tyrrell, J. B. 1892 A, 113.
Cretaceous (Colorado); Manitoba.

Lamna mudgei Cope.

Hay, O. P. 1902 A, 303.
Fowler, H. W. 1911 A, 51, fig. 18.
Gidley, J. W. 1926 E, 16.
Upper Cretaceous (Niobrara); Kansas: ("Greensand No. 4"); New Jersey.

Lamna ornata Agassiz.

Hay, O. P. 1902 A, 303.
Blake, W. P. 1857 A, 152, figs. 1, 2.

Jordan, D. S. 1907 A, 107.
Jordan and Beal 1913 A, 250.
Jordan and Hannibal 1923 A, 46, 61, pl. iii, figs. *v*, *w* (Carcharias).
Miocene; California.

Lamna? quinquelateralis Cragin.

Hay, O. P. 1902 A, 303.
Cretaceous (Comanche); Kansas.

Lamna texana Roemer.

Hay, O. P. 1902 A, 303.
Fowler, H. W. 1911 A, 52, fig. 19.
Gidley, J. W. 1911 in Veatch and Stephenson 1911 A, 208.
Stephenson, L. W. 1912 A, 127, 130, 136, 138, 140, 143, 148, 149.
Upper Cretaceous; Texas, New Jersey: New Mexico (Ripley); Georgia.

Lamna sp. indet.

Hay, O. P. 1902 A, 304.
Bowen, C. F. 1915 A, 120. Upper Cretaceous (Hell Creek); Montana.
Brown, B. 1907 A, 842. Upper Cretaceous (Hell Creek); Montana.
Cannon, G. L. 1890 B, 313. Upper Cretaceous (Niobrara); Colorado.
Gidley, J. W. 1927 E, 274. Pleistocene; Florida.
Gilbert, G. K. 1875 A, 544.
Hay, O. P. 1923 A, 370.
Jordan, D. S. 1907 A, 107. Cretaceous (Chico); California.
Lee, W. T. 1917 A, 202. Upper Cretaceous (Mesaverde); New Mexico.
Sternberg, C. M. 1926 A, 104. Upper Cretaceous (Edmonton); Alberta.
Tuomey, M. 1848 A, 160, 163, 166, 180. Tertiary; South Carolina.
Worthen, A. H. 1890 A, 4, figs. 1-3. Skunk and Des Moines rivers, Iowa.

SPHENODUS Agassiz. Type *Lamna longidens* Agassiz.

Hay, O. P. 1902 A, 302.
Bronn, H. G. 1848 B, 1165.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1919 B, 214 (Preoccupied by Sphenodon).
Jordan, D. S. 1923 A, 99.
Schlosser, M. 1917 A, 136, 137 (Orthacodus).

Sphenodus rectidens Emmons.

Hay, O. P. 1902 A, 302.
Cretaceous; North Carolina.

LEPTOSTYRAX Willist. Type *L. bicuspidatus* Willist.

Hay, O. P. 1902 A, 304.
Jordan, D. S. 1923 A, 99.
Sauvage, H. E. 1901 F, 77.

Leptostyrax bicuspidatus Willist.

Hay, O. P. 1902 A, 304.
Cretaceous (Mentor); Kansas.

OTODUS Agassiz. Type *O. obliquus* Agassiz.

Hay, O. P. 1902 A, 304.
Arldt, T. 1907 D, 339.
1923 A, 484.
Bronn, H. G. 1848 B, 886.
1849 A, 643.
Coulon, L. 1903 A, 126.
Eastman, C. R. 1901 B, 106.
Fowler, H. W. 1911 A, 53.
Giebel, C. G. 1855 A, 116.
Hay, O. P. 1901 B, 67.
Heilprin, A. 1887 A, 300.
Humphreys, J. 1908 A, 14, pl. i, figs. 1, 3.
Jordan, D. S. 1905 A, i, 538.
1907 B, 195.
1919 B, 214 (Syn.? of Lamna).
1923 A, 99.
Leriche, M. 1906 C, 419.
Owen, R. 1845 B, 28.
Priem F. 1896 B, 13.
1908 B, 48.
Probst, J. 1886 B, 308.
Sauvage, E. 1867 A, 119.
Stefano, G. 1912 A, 370.
Stromer, E. 1905 C, 169.
Terra, P. 1911 A, 200, fig. 50.
Winckler, T. C. 1876 A, 4.
Woodward, A. S. 1889 I, 10.

Otodus? apiculatus Agassiz.

Hay, O. P. 1902 A, 304.
Leriche, M. 1906 C, 411.
Eocene; South Carolina.

Otodus crassus Agassiz.

Hay, O. P. 1902 A, 304.
Chapman, F. 1918 A, 16, pl. iii, fig. 10; pl. vii, fig. 16 (Lamna).
Cretaceous; Europe, Alabama.

Otodus levis Gibbes.

Hay, O. P. 1902 A, 304.
Fowler, H. W. 1911 A, 57, fig. 22.
Eocene; South Carolina, New Jersey.

Otodus obliquus Agassiz.

Hay, O. P. 1902 A, 305.
Ameghino, F. 1906 A, 178, 185, pl. ii, fig. 13 (Lamna).
1908 B, 492 (Lamna).
Clark and Miller 1912 A, 117, 118.
Coulon, L. 1903 A, 126.
Eastman, C. R. 1901 B, 106, pl. xv, figs. 1-4c.
1904 H, 82, pl. xxx. figs. 8, 9.

Fowler, H. W. 1911 A, 57, figs. 23, 25 (O. lanceolatus).
Leriche, M. 1902 A, 33.
1905 A, 76.
1906 B, 350, 351, 352, 353, 355.
1906 C, 419.
1908 A, 242, pl. v, figs. 1-5.
1926 A, 15, text-fig. 1.
Miller, B. L. 1911 A, 103.
1912 A, 2.
Shattuck, G. B. 1904 A, xcvi.
Shattuck, Miller and Bibbins 1907 A, 5.
Stanton, T. W. 1920 A, 49, pl. ix, fig. 14.
Stefano, G. 1912 A, 373, pls. xiii, xiv (Lamna).
1912 B, 44, pls. i, ii (Lamna).
Stromer, E. 1905 C, 170.
Woodward, A. S. 1889 I, 10.
Zittel and Schlosser 1923 A, 57, fig. 87 (Lamna).
Tertiary; Europe, Egypt: Upper Cretaceous (Manasquan, etc.); New Jersey: (Lance); North Dakota, South Dakota: Eocene (Shark River); New Jersey: (Aquia); Virginia: (Pamunkey); Maryland: Miocene (Shiloh); New Jersey: (Calvert, Aquia); Maryland.

Otodus sulcatus Geinitz.

Geinitz, F. E. 1843, Char. Schicht. u. Petraf. sachs.-bohm. Kreidegeb., Nachtr., 5, pl. iv, fig. 2.
Hay, O. P. 1902 A, 304 (O. divaricatus).
Leidy, J.* 1873 B, 305, 351, pl. xviii, figs. 26-28 (O. divaricatus).
Leriche, M. 1902 B, 115, pl. iii, fig. 47.
Priem, F. 1908 B, 48.
1912 B, 268.
Cretaceous; Europe: Cretaceous; Texas, Mississippi: (Benton); Kansas.

Otodus trigonatus Agassiz.

Hay, O. P. 1902 A, 305.
Eocene; South Carolina?.

Otodus sp. indet.

Gilbert, G. K. 1875 A, 543. Cretaceous? New Mexico.
Merrill, G. P. 1907 A, 13. Eocene (Wasatch); New Mexico.
Tuomey, M. 1848 A, 160, 163, 166 ("Otodus").
Tertiary; South Carolina.
Uhler, P. H. 1892 A, 206 (Massachusetts).

Isurus Rafinesque. Type *I. oxyrhynchus Raf.* = *Oxyrhina spallanzanii* Bonaparte.

Unless otherwise indicated the authors, as cited, employ for this genus the name *Oxyrhina*.
Hay, O. P. 1902 A, 305 (Isurus).
Allis, E. P. 1915 A, 587.
Ameghino, F. 1906 A, 186.
Arldt, T. 1923 A, 484 (Isurus, Oxyrhina).
Bridge, T. W. 1904 A, 451 (Isurus).
Bronn, H. G. 1848 B, 888.
1849 A, 643.
Coulon, L. 1903 A, 120.
Duméril, A. 1856 A, 131.
Fowler, H. W. 1911 A, 31 (Isurus).
Garman, S. 1913 A, 34 (Isurus).
Gaudry, A. 1896 A, 172, fig. 158.
Giebel, C. G. 1855 A, 116, pl. xlvii.
Hay, O. P. 1901 B, 67 (Isurus).
Huber, O. 1901 A, 618.
Humphreys, J. 1908 A, 14.
Jaekel, O. 1895 E, 32.
1904 A, 27.
Jordan, D. S. 1907 A, 107 (Isurus).
1910 B, 182 (Isurus).
1917 A, 78.
1923 A, 99 (Isurus).
Jordan and Gilbert 1882 A, 28 (Isurus).
Jordan and Hannibal 1923 A, 50 (Isurus).
Lawley, R. 1878 B, 337.
1878 C, 343.
1881 A, pls.
Leriche, M. 1906 C, 419.
1910 D, 274, fig. 77.
Mantell, G. A. 1844 A, 628.
Müller and Henle 1838 A, 36.
Priem, F. 1908 B, 47.
Probst, J. 1886 B, 308.
Radcliffe, L. 1916 A, 247 (Isurus).
Regan, C. T. 1906 A, 734.
Ridewood, W. G. 1921 A, 358.
Roth, W. 1911 A, 539, pls. vi, vii.
Sauvage, E. 1867 A, 123.
Smith, H. M. 1916 A, 342 (Isurus).
Stefano, G. 1912 A, 397.
Stromer, E. 1905 C, 167.
Weiler, W. 1922 A, 88.
Woodward, A. S. 1889 I, 11.
1912 A (1911), 202.
Zittel and Koken 1911 A, 52.
Zittel and Schlosser 1923 A, 58, fig. 89.

Isurus crassus (Agassiz).

Hay, O. P. 1902 A, 305.
Ameghino, F. 1906 A, 180, pl. ii, fig. 19 (Oxyrhina).
Eastman, C. R. 1903 A, 185, pl. i, figs. 11-20; text-figs. 1-3 (Oxyrhina).
1906 E, 82, pl. ii, figs. 1-5, 8-12, 14-17 (Oxyrhina).
Leriche, M. 1906 A, 299 (Oxyrhina).
Stefano, G. 1912 A, 404, pls. xiii, xiv (Oxyrhina. This species?).
Worthen, A. H. 1890 A, 4, fig. 8 (Oxyrhina. This species?).
Eocene; South Carolina, Alabama, Illinois?.

Isurus desorii (Agassiz).

Hay, O. P. 1902 A, 305.
Ameghino, F. 1906 A, 180, 259; pl. ii, fig. 18, text-fig. 47 (Oxyrhina).
1908 B, 481 (Oxyrhina).
Chapman, F. 1918 A, 16, 31, pl. v, figs. 15, 16.
Coulon, L. 1903 A, 121 (Oxyrhina).
Eastman, C. R. 1904 H, 79, pl. xxx, fig. 4 (Oxyrhina).
Fowler, H. W. 1911 A, 32, figs. 5, 6.

* Not Cope, E. D. 1873 B, etc., as in Hay, O. P. 1902 A, 304.

Gervais, P. 1852 A, explan. pl. lxxv (Oxyrhina).
1859 A, 520; pl. lxxv, fig. 2 (Oxyrhina).
Hopkins, F. V. 1870 A, 93 (Oxyrhina).
Jordan, D. S. 1907 A, 112 (This species?).
Jordan and Beal 1913 A, 246, 251.
Jordan and Hannibal 1923 A, 48 (This genus and species?).
Lawley, R. 1878 C, 346, 349 (Oxyrhina).
Leriche, M. 1905 A, 128, 189.
1906 A, 299 (Oxyrhina desori).
1906 B, 353 (Oxyrhina desori).
1906 C, 414, pl. xvi, figs. 8-12 (Oxyrhina desori).
1910 B, 330, pl. iii, figs. 14, 15 (Oxyrhina desori).
1910 D, 275, pl. xvi, figs. 16-31 (Oxyrhina desori).
Priem, F. 1907 A, 465, fig. 8 (Oxyrhina).
1911 B, 330 (Oxyrhina).
1912 A, 215, 218, 227, 238; pl. vi, figs. 1-9; pl. vii, figs. 2-5 (Oxyrhina desori).
Sellards, E. H. 1913 A, pl. vi, figs. 5-7 ("shark").
Shattuck, G. B. 1904 A, xcvi.
Stefano, G. 1912 A, 399, pls. xiii, xiv (Oxyrhina).
Stromer, E. 1903 A, 30; pl. i, figs. 13-15 (Oxyrhina).
1905 C, 167; pl. xv, figs. 15-18 (Oxyrhina desori?).
Weiler, W. 1922 A, 89 (Oxyrhina).
Tertiary; Europe: (Chico); California??: Upper Cretaceous; New Jersey: Miocene; New Jersey, Maryland, Louisiana: Eocene; Alabama, North Carolina, South Carolina.

Isurus hastalis (Agassiz).

Hay, O. P. 1902 A, 306 (I. hastalis); 307 (I. planus, I. tumulus).
Ameghino, F. 1906 A, 179, 259 (Oxyrhina).
1908 B, 479 (Oxyrhina).
Anderson, F. M. 1911 A, 101 (I. planus, I. smithi, I. tumulus).
Arnold, R. 1907 A, 153 (Oxyrhina plana, O. tumulus).
Arnold and Hannibal 1913 A, 591 (Isurus).
Bassani, F. 1891 A, 31, pl. i, fig. 3; pl. ii, figs. 1, 26 (Oxyrhina).
Blake, W. P. 1857 A, 171, 172, figs. 1, 6 (Oxyrhina plana, O. tumula).
1866 A, 107, fig. 9 (Oxyrhina plana).
Chapman, F. 1918 A, 17, 31, pl. v, fig. 21; pl. vi, fig. 5.
Coulon, L. 1903 A, 121 (Oxyrhina plicatilis, O. hastalis).
Dall, W. H. 1894 A, 297 (Oxyrhina).
Eastman, C. R. 1904 H, 80, pl. xxx, figs. 5, 6 (Oxyrhina).
Fowler, H. W. 1911 A, 35, figs. 7, 8.
Gaudry, A. 1906 B, 114 (Oxyrhina).
Gervais, P. 1852 A, explan. pl. lxxv (Oxyrhina hastalis, O. xiphodon, O. plicatilis).
1859 A, 520, pls. lxxv (Oxyrhina hastalis, O. xiphodon, O. plicatilis).
Hay, O. P. 1927 D, 174.
Ishiwara, Y. 1921 A, 62, pl. x, figs. 1-32.
Jordan, D. S. 1907 A, 107, fig. 9 (I. planus); 109, figs. 10, 11 (I. tumulus); 111, fig. 12 (I. smithii).
1910 B, 181 (I. hastalis, I. planus, I. smithii, I. tumulus).
1922 B, 342, fig. *c* (I. planus. This species?).
1925 B, 7, 40.
Jordan and Beal 1913 A, 246, 249, 250, 251 (I. smithii, I. planus, I. tumulus).
Jordan and Gilbert 1919 A, 21, pl. vii, figs. A, D, H, (I. plana, I. smithi, I. tumulus, syns.).
Jordan and Hannibal 1923 A, 50, 61, pl. i, figs. *b, g, h;* pl. iii, figs. *g, x, y;* pl. v, figs. *d, e, f.*
Lawley, R. 1878 B, 339 (Oxyrhina).
1878 C, 348 (Oxyrhina planus, O. tumulus).
Leriche, M. 1906 A, 300 (Oxyrhina).
1906 C, 415.
1908 C, 303 (Oxyrhina, Isurus plana, I. tumulus and I. smithii as syns.).
Lyell, C. 1845 C, 549, 560 (I. hastalis, I. xiphodon).
Merriam, J. C. 1915 B, 288, fig. 7 (I. planus?).
Newton, E. T. 1891 A, 106, pl. ix, figs. 15a, 15b (Oxyrhina).
Priem, F. 1911 B, 330 (Oxyrhina).
1912 A, 215, 218, 227, 238 (Oxyrhina).
Shattuck, G. B. 1904 A, xcvi.
Stefano, G. 1901 A, 555, pl. x, figs. 1, 2 (Oxyrhina).
1912 A, 406, pls. xiii, xiv (Oxyrhina).
1912 B, 48, pls. i, ii.
Stromer, E. 1905 C, 168 (Oxyrhina).
Tomes, C. S. 1898 B, 446 (Oxyrhina).
Weiler, W. 1922 A, 88 (Oxyrhina).
Upper Cretaceous (Manasquan); New Jersey, Delaware: Eocene (Arago); Oregon: (Tejon); California: Miocene (Calvert and Choptank); Maryland, Virginia: (Monterey); California, Lower California: (Empire); Oregon: Pliocene (San Diego); California: Pleistocene (Lomita); California.

Isurus mantellii (Agassiz).

Hay, O. P. 1902 A, 306.
Abel, O. 1919 A, 109, fig. 68 (Oxyrhina).
Ameghino, F. 1906 A, 71 (Oxyrhina).
Bassani, F. 1890 A, 1, pls. (Oxyrhina).
Coulon, L. 1903 A, 120 (Oxyrhina).
Fowler, H. W. 1911 A, 38, figs. 9, 10 (I. acuminatus).
Gervais, P. 1852 A, explan. pl. lxxvi (Oxyrhina).
1859 A, 524, pl. lxxvi, figs. 3, 20 (Oxyrhina).
Hill, R. T. 1901 A, 328 (Oxyrhina extenta).
Lawley, R. 1878 B, 339 (Oxyrhina).
Leriche, M. 1902 B, 116, pl. iii, figs. 49-53 (Oxyrhina).
1906 B, 349 (Oxyrhina).
1906 C, 418 (Oxyrhina).
Moodie, R. L. 1912 C, 378.
Priem, F. 1896 B, 12, pl. i, fig. 10 (Oxyrhina mantelli).
1907 A, 464, fig. 4 (Oxyrhina).
1908 B, pl. ii, fig. 3 (Oxyrhina).
1912 B, 268 (Oxyrhina).

Sauvage, E. 1867 A, 123, pl. iii, fig. 12 (Oxyrhina).
Spillman, W. 1863 A (Oxyrhina).
Sternberg, C. H. 1900 B, 38 ("shark").
1906 B, 123 (Oxyrhina mantelli).
1907 C, 123 (Oxyrhina).
1909 C, 113 (Oxyrhina mantelli).
1911 A, 71 (Oxyrhina mantelli).
Woodward, A. S. 1912 A (1911), 202, pl. xliii, figs. 10-15; text-figs. 60, 61 (Oxyrhina).
Upper Cretaceous; Europe: Upper Cretaceous (Manasquan); New Jersey: Cretaceous; Alabama, Kansas, Mississippi: Eocene; New Jersey: Miocene; New Jersey.

Isurus minutus (Agassiz).

Hay, O. P. 1902 A, 306.
Eastman, C. R. 1904 H, 81 (Oxyrhina. This species?).
Shattuck, G. B. 1904 A, xcvi.
Stromer, E. 1905 C, 168 (Oxyrhina).
Miocene: North Carolina: Miocene (Chesapeake); Maryland: Eocene; South Carolina.

Isurus retroflexus (Agassiz).

Agassiz, L. 1843 B, 281, pl. xxxiii, fig. 10 (Oxyrhina).
Hay, O. P. 1902 A, 306 (I. hastalis, in part).
Agassiz, L. 1843 B, 283, pl. xxxvii, fig. 16 (Oxyrhina crassa).
Chapman, F. 1918 A, 18, pl. iv, figs. 1, 2.
Davis, J. W. 1888 A, 26, pl. iv, figs. 1, 2 (not 3), (O. vonhaastii); 27, pl. v, fig. 14 (O. recta).
Gibbes, R. W. 1846 A, 42 (Oxyrhina).
Woodward, A. S. 1889 D, 389 (O. crassa).
Miocene; South Carolina: Eocene, Miocene, Pliocene; Europe.

Isurus sanctæ-claræ Jordan and Hamlin.

Jordan and Hamlin 1923 A, 52, 61, pl. iii, figs. *e, f;* pl. vi, fig. *e.*
Cretaceous (Chico); California: Oligocene (Vaqueros, San Lorenzo); California: Miocene (Monterey); California.

Isurus sillimanii (Gibbes).

Hay, O. P. 1902 A, 307.
Eastman, C. R. 1904 H, 81, pl. xxx, fig. 7 (Oxyrhina).
Fowler, H. W. 1911 A, 40, fig. 11.
Shattuck, G. B. 1904 A, xcvi.
Stromer, E. 1905 C, 168 (Oxyrhina).
Miocene: New Jersey: Miocene (Calvert); Maryland: Eocene; Egypt.

Isurus sp. indet.

Hay, O. P. 1902 A, 307.
Cannon, G. L. 1890 B, 313 (Oxyrhina). Upper Cretaceous (Niobrara); Colorado.
Cope, E. D. 1875 E, 296 (Oxyrhina sp.). Greensand No. 4, New Jersey.
Fowler, H. W. 1911 A, 42.
Hay, O. P. 1923 A, 381. Pleistocene (Early); Florida.
Jordan and Hannibal 1923 A, 52. Eocene; Oregon.
Merriam, J. C. 1914 C, 644 (Temblor, California).
1915 E, 197, fig. 23.
Tuomey, M. 1848 A, 160, 163, 169 (Oxyrhina). Eocene; South Carolina.

CARCHARODONTINÆ Gill.

Gill, T. 1893 A, 130.
Hay, O. P. 1902 A, 307.
Jordan and Hannibal 1923 A, 53 (Carcharodontidæ).

Carcharodon A. Smith. Type *Squalus carcharias* Linn.

Hay, O. P. 1902 A, 307.
Ameghino, F. 1906 A, 186.
Arldt, T. 1923 A, 484.
Bassani, F. 1891 A, 13.
Bridge, T. W. 1904 A, 452.
Bronn, H. G. 1848 A, 219.
1849 A, 642.
Coulon, L. 1903 A, 127.
Cunningham, J. T. 1912 A, 284.
Deecke, W. 1913 A, 83.
Dollo, L. 1904 C, 48.
Duméril, A. 1856 A, 131.
Eastman, C. R. 1901 B, 107.
Fowler, H. W. 1911 A, 59.
Garman, S. 1913 A, 32.
Giebel, C. G. 1855 A, 116.
Hay, O. P. 1901 B, 67.
Heilprin, A. 1887 A, 297, 300.
Humphreys, J. 1908 A, 14, pl. i, fig. 4.
Jaekel, O. 1895 E, 23, pls. i, ii.
Jordan, D. S. 1905 A, 538.
1907 B, 195.
1919 B, 190.
Jordan, D. S. 1923 A, 99.
1928 A, 1.
Jordan and Gilbert 1882 A, 30.
Jordan and Hannibal 1923 A, 53.
Kingsley, J. S. 1885 A, 79.
Klaatsch, H. 1890 A, 121.
Lawley, R. 1878 A, 330.
1881 A, pls.
Leriche, M. 1906 C, 413.
1910 D, 287, fig. 89.
Leunis and Ludwig 1883 A, 784.
Matthew, W. D. 1908 H, 110.
Müller and Henle 1838 A, 36.
Owen, R. 1839 G, 212.
1845 B, 30.
Priem, F. 1908 B, 79, 123, fig. 61.
Probst, J. 1886 B, 309.
Radcliffe, L. 1916 A, 247.
Ridewood, W. G. 1921 A, 355, fig. 9.
Schmalhausen, J. J. 1913 A, 10.
Smith, H. M. 1916 A, 342.
Stefano, G. 1912 A, 357.
Storms, R. 1901 A, 259.

Stromer, E. 1905 C, 172.
1905 E, 315.
1925 A, 20.
Terra, P. 1911 A, 200, fig. 49.
Tomes, C. S. 1898 B, 459.
Wilckens, O. 1911 A, 708.
Woodward, A. S. 1889 I, 11.
Zittel and Koken 1911 A, 53.
Zittel and Schlosser 1923 A, 58.

Carcharodon angustidens Agassiz.

Hay, O. P. 1902 A, 307 (C. auriculatus, in part).
Ameghino, F. 1906 A, 181, pl. ii, fig. 20.
Coulon, L. 1903 A, 127.
Dall, W. H. 1894 A, 297.
Dean, B. 1923 A, 607, fig.
Hopkins, F. V. 1871 A, 13 (This species?).
Jordan, D. S. 1907 A, 112.
Leriche, M. 1906 A, 303.
1906 C, 411.
1910 B, 330.
Priem, F. 1906 A, 199, pl. viii, figs. 14, 15.
1911 B, 331, fig. 3.
1912 A, 215, 227, 239, pl. vii, fig. 7.
Sellards, E. H. 1913 A, pl. vii, fig. 6 ("shark." This species?).
Storms, R. 1901 A, 266.
Stromer, E. 1905 C, 173, pl. xv, figs. 1-7.
Tertiary; of world-wide distribution: Eocene and Miocene; reported from some parts of the United States: Eocene (Jackson and Vicksburg); Louisiana.

Carcharodon arnoldi Jordan.

Jordan, D. S. 1907 A, 113, fig. 13.
Arnold and Anderson 1910 A, 130, 133, 329.
Hay, O. P. 1927 D, 174.
Ishiwara, Y. 1921 A, 67, pl. xii, figs. 3, 4.
Jordan, D. S. 1910 B, 182.
1922 B, 340.
1926 B, 258.
Jordan and Beal 1913 A, 245, 252.
Jordan and Gilbert 1919 A, 22, 62.
1920 A, 9.
Jordan and Hannibal 1923 A, 55, 62, pl. i, fig. *f*; pl. vi, fig. *j*.
Leriche, M. 1908 C, 304 (Syn. of C. rondeleti).
Miocene (Monterey): Pliocene (San Diego): Pleistocene (San Pedro); all in California.

Carcharodon branneri Jordan.

Jordan, D. S. 1907 A, 116, fig. 15.
Anderson, F. M. 1911 A, 10.
Hay, O. P. 1927 D, 174.
Jordan, D. S. 1926 B, 258.
Jordan and Gilbert 1919 A, 22 (Syn. of C. megalodon).
Jordan and Hannibal 1923 A, 53, pl. vi, fig. *f*; pl. v, fig. *a*.
Leriche, M. 1908 C, 304 (Syn. of C. megalodon).
Miocene (Monterey); California, Lower California, South Carolina, Florida: Pliocene (Purissima); California: Pleistocene (San Pedro); California.

Carcharodon carcharias (Linn.).

Hay, O. P. 1902 A, 308.
Arldt, T. 1923 A, 485 (C. rondeletii).
Bassani, F. 1905 A, 13, pl. i (C. rondeleti).
Chapman, F. 1918 A, 20, pl. vi, fig. 22; pl. viii, figs. 1, 2 (C. rondeletii).
Garman, S. 1913 A, 32, pl. v, figs. 5-9.
Haswell, W. A. 1884 A, 83, pl. i (C. rondeleti).
Ishiwara, Y. 1921 A, 68, pl. xii, fig. 5.
Jordan, D. S. 1905 A, 538.
1907 B, 195.
1910 B, 182.
1922 B, 340, fig. 1*d*. (This species?).
Jordan and Beal 1913 A, 252.
Jordan and Gilbert 1882 A, 30.
Radcliffe, L. 1916 A, 247, pl. xxxviii.
Smith, H. M. 1916 A, 341, fig.
Stefano, G. 1901 A, 558 (C. rondeleti).
1912 B, 43, pls. i, ii (C. rondeleti).
Stevenson, W. G. 1884 A, 83, pls. i, ii.
1884 B, 140, pl. i, text-fig. 1.
Recent, in all temperate and tropical seas: Miocene?, Pliocene?, Pleistocene?; California.

Carcharodon contortidens Emmons.

Hay, O. P. 1902 A, 308.
Eocene; North Carolina.

Carcharodon lanciformis Gibbes.

Hay, O. P. 1902 A, 308.
Eastman, C. R. 1906 E, 82, pl. ii, figs. 13, 19-22.
Jordan and Hannibal 1923 A, 57.
Phosphate beds; South Carolina.

Carcharodon leptodon Agassiz.

Hay, O. P. 1902 A, 308 (This species?).
Eocene; South Carolina.

Carcharodon leviathan Jordan and Hannibal.

Jordan and Hannibal 1923 A, 55, pls. vii, viii.
Hay, O. P. 1927 D, 174, 187.
Jordan, D. S. 1922 B, 338, figs. 1-3 (C. branneri).
1925 B, 49.
1926 B, 258.
Pleistocene (Lomita, La Brea); California.

Carcharodon megalodon Agassiz.

Agassiz, L. 1843 B (1835), pl. xxix, figs. 1-7 (Carcharias).
Hay, O. P. 1902 A, 308.
Abel, O. 1922 C, 237, fig. 197 and frontispiece.
Ameghino, F. 1904 B, 11.
1906 A, 185, 259.
1908 B, 481.
Arldt, T. 1907 D, 596.
Bassani, F. 1891 A, 14, pl. i, figs. 1, 2.
Binney, E. W. 1879 A, 118 (Carcharias vulgaris).
Blake, C. C. 1862 C, 316.
Blake, J. H. 1873 A, 172 (C. subauriculatus).
1874 A, 270 ("Carcharodon").
Chapman, F. 1918 A, 19, pl. ii, figs. 1-3.
Coulon, L. 1903 A, 127.

Croom, H. B. 1835 A, 170 ("shark").
Dean, B. 1909 A, 233, pl.
Eastman, C. R. 1903 A, 186, pl. i, figs. 21-23.
1904 H, 82, pl. xxxi, figs. 1-4.
1906 E, 82, pl. ii, fig. 23.
Gaudry, A. 1906 B, 114.
Gervais, P. 1852 A, explan. pls. lxxiv, lxxv.
1859 A, 520, 521, pl. lxxiv, figs. 10-12, 16.
Giebel, C. G. 1855 A, 116, pl. xlvii, fig. 18.
Hansemann, D. 1910 A, 387.
Harlan, R. 1834 B, 89 ("shark," in part).
Hay, O. P. 1922 B, 3.
1927 D, 187.
Hennig, E. 1914 A, 307, pl. xxiii, fig. 8 (This species?).
Hussakof, L. 1912 C, 224, 2 figs.
Jaekel, O. 1902 E, 1078.
Jordan, D. S. 1905 A, 1, 538, fig. 332.
1907 A, 116.
1907 B, 195, fig. 138.
1910 B, 182.
1922 B, 338.
Jordan and Beal 1913 A, 245, 251.
Jordan and Gilbert 1919 A, 22.
Jordan and Hannibal 1923 A, 54 (C. megalodon, C. mortoni).
Lawley, R. 1878 A, 334.
Lankester, E. R. 1905 A, 26, 51, fig. 192a.
Leriche, M. 1906 A, 304.
1908 C, 304 (C. riversi, in part, and C. branneri as syns.).
Lucas, F. A. 1901 J, 65.
Lyell, C. 1845 A, 415 (Carcharias).
1845 C, 549, 560 (C. megalodon, C. productus).
McLenahan, S. 1852 A, 71 ("whale," in part).
Manigault, G. E. 1887 A, 131, pl. i.
Newton, E. T. 1891 A, 103, pl. ix, figs. 13*a*, 13*b*.
Owen, R. 1839 G, 212 (Carcharias).
1845 B, 34 (Carcharias).
1868 A, 870.
Priem, F. 1912 A, 215, 218, 227, 239, pl. vii, figs. 8, 9.
1914 A, 122, pl. iii, fig. 4.
Serres, M. 1852 A, 116.
Shattuck, G. B. 1904 A, xcvi.
Stefano, G. 1912 A, 360, pls. xiii, xiv.
1912 B, 41, pls. i, ii.
Sternberg, C. H. 1911 A, 71.
Underhill, B. M. 1910 A, 77.
Weiler, W. 1922 A, 92, pl. ii.
Woodward, A. S. 1922 C, 72, fig. 73.
Zittel and Schlosser 1923 A, 58, fig. 91.
Miocene (Calvert); Maryland, Virginia, South Carolina?, California.

Carcharodon morricei Jordan.

Jordan, D. S. 1926 B, 259, pl. xxvi, fig. 2.
Lower Miocene (Temblor); California.

Carcharodon polygurus (Morton).

Hay, O. P. 1902 A, 308 (*C. megalodon*, including *C. polygurus*, by error *C. polygyrus*).
Fowler, H. W. 1911 A, 61, fig. 27.
Ishiwara, Y. 1921 A, 65 (C. polygyrus, syn. of C. megalodon).
Sellards, E. H. 1915 D, 99, fig. 28 ("Carcharodon").
Upper Cretaceous (Manasquan?); New Jersey: Eocene (Shark River?); New Jersey, Delaware: Eocene (Pamunkey); Virginia: Miocene? New Jersey: Miocene or Pliocene, Florida.

Carcharodon purplei Jordan and Hannibal.

Jordan and Hannibal 1923 A, 56, 63, pl. v, fig. *g*; pl. vi, fig. *b*.
Hay, O. P. 1927 D, 174.
Jordan, D. S. 1926 B, 260.
Pliocene (San Diego); California.

Carcharodon riversi Jordan.

Jordan, D. S. 1907 A, 115, fig. 14.
Hay, O. P. 1927 D, 174.
Ishiwara, Y. 1921 A, 67.
Jordan, D. S. 1910 B, 182 (Syn. of C. carcharias?).
1922 B, 340, fig. 1*b*.
1926 B, 260.
Jordan and Beal 1913 A, 245, 252 (Syn. of C. arnoldi).
Jordan and Hannibal 1923 A, 56, 63, pl. v, fig. *b*.
Leriche, M. 1908 C, 104 (Syn. of C. rondeletii).
Pliocene or Pleistocene (San Diego); California.

Carcharodon tembloris Jordan.

Jordan, D. S. 1926 B, 258, pl. xxvi, figs. 1, 3.
Lower Miocene (Temblor); California.

Carcharodon sp. indet.

Undetermined teeth of *Carcharodon* have been reported as follows:
Hay, O. P. 1923 A, 370. Pleistocene; Florida.
Merriam, J. C. 1915 E, 197, fig. 22. California.
Osborn, H. F. 1918 A, 23. Miocene (Temblor); California.
Sellards, E. H. 1915 D, 98, fig. 28. Florida.
Tuomey, M. 1848 A, 160, 165, 166, 178, 180. Tertiary; South Carolina.
Uhler, P. H. 1892 A, 205, 206. Massachusetts.

CARCHAROCLES Jordan and Hannibal. Type *Carcharodon auriculatus* (Blainville).

Jordan and Hannibal in Jordan, D. S. 1923 A, 99.
Jordan, D. S. 1923 A, 99.
Jordan and Hannibal 1923 A, 56.

Carcharocles auriculatus (Blainville).

Unless otherwise indicated the authors, as cited, refer this species to *Carcharodon*.
Hay, O. P. 1902 A, 307.
Ameghino, F. 1904 B, 11, fig. 3.
1906 A, 181, pl. ii, fig. 21.
1908 B, 481.
Bassani, F. 1891 A, 19, pl. ii, figs. 24, 25.
1895 A, 6, pl.
Chapman, F. 1918 A, 18, 32, pl. i, figs. 4-7.
Clark and Miller 1912 A, 117, 118.
Coulon, L. 1903 A, 127 (C. disauris).
Deuesen, A. 1924 A, 86.

Eastman, C. R. 1901 B, 108.
Fowler, H. W. 1911 A, 59, fig. 26.
Gervais, P. 1852 A, explan. pls. lxxiv, lxxv (Carcharodon disauris).
1859 A, 520, pls. lxxiv, lxxv (C. disauris).
Hay, O. P. 1922 B, 3.
Jordan, D. S. 1923 A, 99 (To Carcharocles).
Jordan and Hannibal 1923 A, 57 (Carcharodon acutidens).
Leriche, M. 1905 A, 130, 189, 208.
1906 B, 353, 355.
1906 C, 411 (C. auriculatus); 414 (C. disauris).
Lucas, F. A. 1901 J, 66.
Priem, F. 1906 A, 199, pl. viii, fig. 13.
Sellards, E. H. 1913 A, pl. vi, figs. 1-4 ("shark").
Stefano, G. 1912 A, 358, pls. xiii, xiv (Carcharodon).
1912 B, 39, 40, pls. i, ii (Carcharodon auriculatus, C. angustidens).
Storms, R. 1901 A, 261, pl. vii, figs. 5-16 (C. auriculatus); 267 (C. turgidus).
Stromer, E. 1905 C, 173.
1905 E, 315.
Woodward, A. S. 1889 I, 11 (Carcharodon).
Upper Cretaceous (Manasquan, etc.); New Jersey: Eocene (Shark River); New Jersey: (Nanjemoy); Maryland, Virginia: (Fayette); Texas: Miocene (Shiloh); New Jersey.

Carcharocles rectus (Agassiz).

Hay, O. P. 1902 A, 308 (Carcharodon).
Anderson, F. M. 1911 A, 101 (Carcharodon).
Arnold, R. 1907 A, 153 (Carcharodon).
Blake, W. P. 1857 A, 172 (Carcharodon).
Gabb, W. P. 1865 A, 174 (Carcharodon).
Jordan, D. S. 1907 A, 112 (Carcharodon).
1910 B, 182 (Carcharodon).
Jordan and Beal 1913 A, 245, 248, 252 (Carcharodon).
Jordan and Gilbert 1919 A, 22 (Carcharodon).
Jordan and Hannibal 1923 A, 57, pl. i, figs. *a-f*, *i-j* (Carcharocles).
Miocene (Monterey); California.

Corax Agassiz. Type *Galeus pristodontus* Morton.

Hay, O. P. 1902 A, 309.
Ameghino, F. 1906 A, 182, 186.
Arldt, T. 1923 A, 484.
Bronn, H. G. 1848 A, 333.
1849 A, 642.
Chapman, F. 1909 A, 452.
Coulon, L. 1903 A, 128.
Fowler, H. W. 1911 A, 62.
Giebel, C. G. 1855 A, 117.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1905 A, i, 542.
1907 B, 195, 199.
1919 B, 214.
1923 A, 99.
Leriche, M. 1902 B, 119.
1906 C, 413.
Priem, F. 1908 B, 20, fig. 10.
Sauvage, H. E. 1867 A, 124.
Winckler, T. C. 1876 A, 10.
Woodward, A. S. 1917 D, lxxiv.
1912 A (1911), 196, text-fig. 57.
Zittel and Koken 1911 A, 52.
Zittel and Schlosser 1923 A, 58.

Corax curvatus Williston.

Hay, O. P. 1902 A, 309.
Cretaceous (Benton); Kansas.

Corax falcatus Agassiz.

Hay, O. P. 1902 A, 309 (C. falcatus); 311 (Galeocerdo hartwellii).
Ameghino, F. 1906 A, 71.
Berry, E. W. 1916 A, 354, pl. ix, fig. 2.
Cockerell, T. D. A. 1908 C, 162 (C. falcatus); 161 (Galeocerdo hartwellii).
Coulon, L. 1903 A, 128 (C. appendiculatus).
Fowler, H. W. 1911 A, 63, fig. 28.
Gidley, J. W. in Veatch and Stephenson 1911 A, 208, 215.
1926 E, 16.
Giebel, C. G. 1855 A, 117, pl. xlvii, figs. 13, 17 (C. heterodon).
Hennig, E. 1914 A, 307, pl. xxiii, fig. 6 (C. heterodon).
Hussakof, L. 1908 A, 29, fig. 6.
Leriche, M. 1902 B, 121, pl. iii, figs. 76-78.
1906 B, 348.
1906 C, 415.
Priem, F. 1907 A, 463, figs. 3, 6.
1912 B, 269.
1913 A, 161.
Sauvage, E. 1867 A, 124.
Stephenson, L. W. 1912 A, 127, 130, 136, 148.
1918 A, 153, 157.
Woodward, A. S. 1912 A (1911), 198, pl. xlii, figs. 16-28; text-fig. 59.
Cretaceous; Europe: Upper Cretaceous (Ripley); Georgia: (Niobrara); Kansas, New Mexico, Texas, Wyoming: (Manasquam, etc.); New Jersey: (Matawan); Maryland.

Corax pristodontus Agassiz.

Hay, O. P. 1902 A, 309.
Berry, E. W. 1916 A, 352, pl. ix, fig. 1.
Fowler, H. W. 1911 A, 64, fig. 29.
Leriche, M. 1902 B, 119, pl. iii, figs. 66-75.
1906 B, 348.
1906 C, 420.
Lyell, C. 1844 A, 303 (Galeus).
Mantell, G. A. 1844 A, 626, fig. 130 (Galeus).
Merrill, G. P. 1907 A, 11 (Galeocerdo).
Morton, S. G. 1834 A, 31, pl. ii, fig. 6 (Squalius sp.).
Priem, F. 1896 B, 17, pl. ii, figs 11-13.
1912 B, 269.
1914 C, 367, pl. x, fig. 17.
Spillman, W. 1863 A (C. appendiculatus).
Todd, J. E. 1908 A, 194.
Tuomey, M. 1848 A, 166 ("Corax").
Woodward, A. S. 1912 A (1911), 197, pl. xlii, figs. 12-15; text-fig. 58.
Upper Cretaceous; Old World: Upper Cretaceous (Manasquan, etc.); New Jersey:

(Matawan, Monmouth); Maryland: Eocene; Alabama, Mississippi, South Carolina: Miocene; Virginia.

Corax sp. indet.

Gidley, J. W. 1926 F, 192, pl. lxii, fig. 11.
Upper Cretaceous (Ripley); Tennessee.

PSEUDOCORAX Priem. Type *Corax affinis* Agassiz.

Priem, F. 1897 A, 46.
Leriche, M. 1902 B, 122.

Pseudocorax affinis (Agassiz).

Hay, O. P. 1902 A, 309 (Corax).
Leriche, M. 1902 B, 122, pl. iii, figs. 79-86.
1906 C, 80, 411.
Priem, F. 1897 A, 46, pl. i, figs. 20-27.
1898 B, 400, pl. x, fig. 8.
Woodward, A. S. 1912 A (1911), 201, pl. xliii, figs. 4-9 (Corax).
Upper Cretaceous; Europe: Eocene; Alabama?

XENODOLAMIA Leidy. Type *X. pravus* Leidy.

Hay, O. P. 1902 A, 301 (Xiphodolamia); 309 (Xenodolamia).
Fowler, H. W. 1911 A, 25 (Xiphodolamia).
Jordan, D. S. 1923 A, 99 (Xenodolamia, Xiphodolamia).
Jordan and Hannibal 1923 A, 42, 45, 48, 58 (Xiphodolamia).
Leriche, M. 1905 A, 183 (Xenodolamia); 184 (Xiphodolamia).
1906 C, 199, figs. 42-48 (Xiphodolamia a syn.).

Xenodolamia ensis Leidy.

Hay, O. P. 1902 A, 301 (Xiphodolamia).
Eastman, C. R. 1904 H, 77 (Xiphodolamia).
Fowler, H. W. 1911 A, 26, fig. 2 (Xiphodolamia).
Upper Cretaceous (Manasquan, etc.); New Jersey.

Xenodolamia pravus Leidy.

Hay, O. P. 1902 A, 309.
(Phosphate beds); South Carolina.

Xenodolamia simplex Leidy.

Hay, O. P. 1902 A, 309.
(Phosphate beds); South Carolina.

Superfamily GALEOIDÆ, new form.

Hay, O. P. 1902 A, 301 (Galeoidea).
Arldt, T. 1923 A, 484 ("galeoiden").
Beer, G. R. 1924 B, 60 (Scyllioidei).
Fowler, H. W. 1911 A, 29 (Galei).
Garman, S. 1913 A, 10, 12 (Carcharinoidei).
Gill, T. 1873 F, 12 (Galeorhinoidea).
1882 A, 967 (Anarthri or Galei).
1885 A, lxiv (Anarthri).
Goodrich, E. S. 1909 A, 148 (Scyllioidei).
Gregory, W. K. 1907 D, 446 (Scylliorhinoidea).
Jordan, D. S. 1905 A, I, 525; II, 558 (Asterospondyli).
1907 B, 186, 189, 758 (Asterospondyli, Galei).
1923 A, 100 (Galeoidei).
Pompeckj, J. F. 1913 A, 1127 (Galeoidei).
Rauther, M. 1913 A, 1098 (Galeoidei).
Regan, C. T. 1906 A, 723, 741 (Galeoidei).
1908 D, 347 (Galeoidei).
Ridewood, W. G. 1921 A, 313 (Galeoidei).
Van Wijhe, J. W. 1922 A, 291 (Galeoidei).

GINGLYMOSTOMIDÆ Gill.

Gill, T. 1872 C, 24.
Hay, O. P. 1902 A, 310 (Ginglymostominæ).
Fowler, H. W. 1911 A, 29 (Ginglymostomidæ).
Garman, S. 1913 A, 43 (Orectolobidæ).
Gill, T. 1862 A, 406 (Ginglymostomatoidæ).
Goodrich, E. S. 1909 A, 149 (Orectolobinæ).
Jordan, D. S. 1905 A, i, 533 (Ginglymostomidæ).
Jordan, D. S. 1907 B, 190, 758 (Ginglymostomidæ).
1923 A, 98 (Ginglystomidæ, *errore?*).
Mayer, P. 1886 A, 275 ("scylliolamniden").
Radcliffe, L. 1916 A, 248 (Orectolobidæ).
Regan, C. T. 1906 A, 723 (Orectolobidæ).
Stromer, E. 1905 C, 165, 179 (Scylliolamnidæ).
Zittel, K. A. 1890 A, 80 (Scylliolamnidæ).

GINGLYMOSTOMINÆ Gill.

Hay, O. P. 1902 A, 310.

GINGLYMOSTOMA Müller and Henle. Type *Squalus cirratus* Gmelin.

Hay, O. P. 1902 A, 310.
Arldt, T. 1923 A, 485.
Bridge, T. W. 1904 A, 447.
Duméril, A. 1856 A, 121 ("ginglymostome").
Fowler, H. W. 1911 A, 30.
Garman, S. 1913 A, 43, 54.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1919 C, 190.
1923 A, 98.
Jordan and Gilbert 1882 A, 18.
Leriche, M. 1906 C, 415.
Mayer, P. 1886 A, 275.
Müller and Henle 1838 A, 35.
Priem, F. 1904 A, 288.
1908 B, 94, fig. 51.
1914 A, 121.
Radcliffe, L. 1916 A, 248, pl. xxxix.
Regan, C. T. 1906 A, 736, fig. 116.
1908 D, 348, 350.
Ridewood, W. G. 1921 A, 342, 366, fig. 18.

Schlosser, M. 1917 A, 143.
Stromer, E. 1905 C, 165.
Zittel and Schlosser 1923 A, 56, fig. 79.

Ginglymostoma obliquum (Leidy).
Hay, O. P. 1902 A, 310.

Fowler, H. W. 1911 A, 30, fig. 4.
Eocene; New Jersey.

Ginglymostoma serra (Leidy).
Hay, O. P. 1902 A, 310.
Eocene; South Carolina.

SCYLIORHINIDÆ Regan.

Regan, C. T. 1906 A, 723, 741, 745.
Unless otherwise indicated the authors, as quoted, use for this family the name Scylliidæ.
Hay, O. P. 1902 A, 310 (Scylliorhinidæ).
Allis, E. P. 1913 A, 322.
1914 A, 359.
1923 B, 145.
1926 B, 338.
Arldt, T. 1907 D, 283 (Scyllidæ).
1923 A, 486 ("scylliorhiniden").
Bonaparte, C. L. 1840 A, 46 (Scyllini).
Braus, H. 1899 A, 521 ("scyllidæ").
1906 A ("scylliiden").
Bridge, T. W. 1904 A, 446.
Carus, V. 1875 A, 601.
Cope, E. D. 1891 N, 17 (Scyllidæ).
Cunningham, J. T. 1912 A, 246.
Dollo, L. 1889 F, 341.
1904 C, 50.
Fitzinger, L. J. 1873 A, 55 (Scyllia).
Gegenbaur, C. 1870 B, 449 ("scyllien").
Gill, T. 1905 A, 658 (Scylliorhinidæ).
Müller and Henle 1838 A, 34 (Scyllia).
Goodrich, E. S. 1909 A, 149 (Scylliorhinidæ).
Gregory, W. K. 1907 D, 446 (Scylliorhinidæ).
Günther, A. C. 1881 A, 685.
Hay, O. P. 1901 B, 67 (Scylliorhinidæ).
Huber, O. 1901 A, 612 (Scyllidæ).
Imms, A. D. 1905 A, 44.
Jordan, D. S. 1905 A, I, 532; II, 591 (Scylliorhinidæ).
1907 B, 189, 758 (Scylliorhinidæ).
Jordan, D. S. 1923 A, 98 (Scylliorhinidæ).
Jordan and Gilbert 1882 A, 17, 58.
Kingsley, J. S. 1885 A, 83.
Kryzanovsky, S. 1916 A, 235 (Pristiurus).
Leigh-Sharpe, W. H. 1926 A, 339.
Leunis and Ludwig 1883 A, 785.
Mayer, P. 1886 A, 253, 273.
Owen, R. 1868 A, 13.
Pompeckj, J. F. 1913 A, 1127.
Priem, F. 1904 A, 288 (Scyllidæ).
1908 B, 95 ("scyllidés").
Rabinerson, A. 1925 A, 436, 453 ("scylliiden").
Rabl, C. 1901 A, 523 ("scyllien").
Rauther, M. 1913 A, 1098.
Regan, C. T. 1906 A, 723, 741, 745 (Scyliorhinidæ).
1908 A, 453 (Scyliorhinidæ).
1912 A, 837 (Scyliorhinidæ).
Ridewood, W. G. 1921 A, 362.
Roth, W. 1911 A, 534.
Sagemehl, M. 1883 A, 225 ("scyllien").
Schlosser, M. 1917 A, 137, 139, 141 ("scylliden").
Schmalhausen, J. J. 1913 C (Scyllidæ).
Stromer, E. 1905 C, 164, 179.
1912 A, 19.
Van Wijhe, J. W. 1922 A, 292 (Scyllidæ).
Wallace, A. R. 1876 A, ii, 461 (Scyllidæ).
White, J. W. 1905 A, 321 (Scyllidæ).
Woodward, A. S. 1898 B, 46 (Scyllidæ).
1912 A (1911), 193.
Zittel and Koken 1911 A, 50 (Scyllidæ).
Zittel and Schlosser 1923 A, 56 (Scyllidæ).

SCYLIORHININÆ new form.

Hay, O. P. 1902 A, 310 (Scylliorhininæ).
Gill, T. 1862 A, 407 (Scylliorhininæ).
Goodrich, E. S. 1909 A, 149 (Scylliorhininæ).

SCYLIORHINUS Blainville. Type *Squalus canicula* Lacepède.

Unless otherwise indicated the authors, as quoted, use the name *Scyllium* for this genus.
Blainville, H. M. D. 1816, Bull. Soc. Philomat., 121 (Scyliorhinus).
Hay, O. P. 1902 A, 310 (Scylliorhinus).
Abel, O. 1919 A, 29, 107, figs. 6, 66.
Allis, E. P. 1915 A.
1917 A, 108.
1926 A, 164.
Arldt, T. 1923 A, 486 (Scyllium, Scylliorhinus).
Beer, G. R. 1922 A, 459.
1924 C, 289, figs. 1-4, 5-10.
Bolk, L. 1914 A, 4.
Braus, H. 1906 A.
Bridge, T. W. 1904 A, 446, 755.
Bronn, H. T. 1848 B, 112.
1849 A, 645.
Cartier, O. 1875 A, 67, pl. iv, fig. 3.
Cunningham, J. T. 1912 A, 244.
Daniel, J. F. 1922 A, figs. 21*b*, 22, 72, 77, 142.
Davidoff, M. 1879 A.
Derjugin, K. 1910 A, 587.
Dombrowsky, B. A. 1918 A, 199, fig. 2.
Duméril, A. 1856 A, 120 ("roussette").
Edgeworth, F. H. 1907 A, 524.
1925 A, 238, figs. 1-20.
1926 A, 176, fig. 1.
Elliot, A. I. M. 1907 A, 648.
Fahrenholz, C. 1915 A, 400.
Fürbringer, K. 1902 A, 158.
1903 A, 393.
Garman, S. 1913 A, 3 (Scyliorhinus); 71 (Catulus in part); 96 (Apristurus).
Gaupp, E. 1905 D, 880.
Gegenbaur, C. 1870 B, 450, pl. xv, figs. 4-6.
1870 C, 407.
Gibian, A. 1912 A.
Giebel, C. G. 1855 A, 117.

Goodrich, E. S. 1904 A, 484, fig. 1.
1906 A, 345, figs. 1-3.
1909 A, 149, 516, fig. 1.
1918 A, 1, pls. i, ii; text-fig. 1.
Haller, G. 1923 A, 96, fig. 20.
Hay, O. P. 1901 B, 67 (Scylliorhinus).
Heilprin, A. 1887 A, 294, 299, 300.
Huber, O. 1901 A, 612.
Huxley, T. H. 1876 E, 113, fig. 10.
Ihering, H. 1878 A, 74.
Jacobshagen, E. 1923 A, 178.
Jaekel, O. 1901 A, 552.
1909 D, 722.
Jordan, D. S. 1907 B, 190 (Scylliorhinus).
1923 A, 98 (Scylliorhinus).
Jordan and Gilbert 1882 A, 58, 869 (Scylliorhinus).
Jordan and Evermann 1917 A, 95 (Scylliorhinus).
Killian, G. 1891 A, 85, figs. 1-24.
Kingsbury, B. F. 1926 A, 98-104 (Scyllium).
Kingsley, J. S. 1925 A, 228, fig. 241.
Klaatsch, H. 1890 A, 120, 175, pls. vi, vii.
Kner, R. 1860 B, 816.
Leigh-Sharpe, W. H. 1921 A, 359.
1926 A, 322, 339, figs. 1-10.
Leriche, M. 1906 C, 421.
Leunis and Ludwig 1883 A, 785.
Lubosch, W. 1909 A, 3.
Matthes, E. 1921 A, 216.
Mayer, P. 1886 A, 224.
Meek, A. 1916 A, 39, 40 (Scylliorhinus).
Mivart, St. G. 1878 B, 311, 332.
Müller and Henle 1838 A, 34.
Norman, E. W. 1926 A, 413 (Scyliorhinus).
Owen, R. 1845 B, 27, 29.
1848 B, 87.
1866 A, 33, 35.
Pouchet, G. 1878 A, 148, pl. iv.
Priem, F. 1908 B, 77, 106.
Probst, J. 1886 B, 308.
Rabinerson, A. 1925 A, 436, 520, 561.
Rabl, C. 1892 A, 109.
1901 A, 523.
Regan, C. T. 1906 A, 730, 735 (Scyliorhinus).
1908 A, 453 (Scyliorhinus).
Reynolds, S. H. 1897 A, 71, 114, 119, 130, figs. 6-8.
Ridewood, W. G. 1895 B, 425, fig. 1.
1896 A, 383.
1899 A, 47, figs. 1, 2.
1921 A, 326, 328, 362, figs. 15, 16.
Roth, W. 1911 A, 534, pls. vi, vii.
Ryder, J. 1886 A, 74.
Sabatier, A. 1898 A, 929.
1903 B, 1217.
Salensky, W. 1899 B, 304.
Schauinsland, H. 1906 A, 395, fig. 1.
Schmalhausen, J. J. 1912 A, 510.
1913 B, 745.
1913 C, pl. i.
1916 C, 214, fig. 6.
Sečerov, S. 1911 A, 8, pl. i.
Sewertzoff, A. N. 1926 D, 87, fig. 16.
Sewertzoff and Disler 1924 A, 347 (Sciliorhinus).
Shann, E. W. 1919 A, 533.
Solger, B. 1880 B, 466.
Stannius, H. 1854 A, 89.
Steinhard, O. 1903 A, 16.
Tomes, C. S. 1876 A, 266, pl. xxxi.
1898 B, 444.
Van Wijhe, J. W. 1922 A, 276, 291.
White, J. W. 1905 A, 319.
White, P. J. 1896 A, 158.
Williston, S. W. 1905 B, 347 (Scylliorhinus).
Woodward, A. S. 1912 A (1911), 194.
Ziegler, H. E. 1923 A, 66, fig. 3.
Zittel and Schlosser 1923 A, 56, fig. 78.

Scyliorhinus? gracilis (Willist.).

Hay, O. P. 1902 A, 310 (Scylliorhinus).
Merrill, G. P. 1907 A, 20 (Scylliorhinsis).
Cretaceous (Greenleaf); Kansas.

Scyliorhinus planidens (Willist.).

Hay, O. P. 1902 A, 310 (Scylliorhinus).
Merrill, G. P. 1907 A, 20 (Scylliorhinsis).
Cretaceous (Greenleaf); Kansas.

Scyliorhinus rugosus (Willist.).

Hay, O. P. 1902 A, 310 (Scylliorhinus).
Merrill, G. P. 1907 A, 20 (Scylliorhinsis).
Cretaceous (Greenleaf); Kansas.

GALEIDÆ Hoernes ?

Hoernes, R. 1886 A, 542 (earliest?).
Hay, O. P. 1902 A, 310 (Galeidæ).
Abel, O. 1919 A, 121 (Carchariidæ).
Allis, E. P. 1914 A, 359 (Carchariidæ).
Arldt, T. 1923 A, 486 ("carchariiden").
Braus, H. 1906 A, 182 ("carchariiden").
Bridge, T. W. 1904 A, 448 (Carchariidæ).
Carus, V. 1875 A, 600 (Carchariidæ).
Dollo, L. 1889 F, 342 (Carchariidæ).
1904 C, 48 (Carchariidæ).
Eastman, C. R. 1901 B, 108 (Carchariidæ).
Fahrenholz, C. 1915 A, 402 (Carcharias).
Fitzinger, L. J. 1873 A, 55 (Galei).
Fowler, H. W. 1911 A, 66 (Galeorhinidæ).
Gill, T. 1872 A, 24 (Galeorhinidæ).
Goodrich, E. S. 1909 A, 150 (Carchariidæ).
Gregory, W. K. 1907 D, 447 (Galeidæ).
Hay, O. P. 1901 B, 67 (Galeidæ).
Hoernes, R. 1886 A, 541 (Carchariidæ); 542 (Galeidæ).
Huber, O. 1901 A, 624 (Galeidæ).
Imms, A. D. 1905 A, 43 (Carchariidæ).
Jordan, D. S. 1905 A, i, 540; ii, 561 (Carchariidæ).
1907 B, 197, 758 (Carchariidæ).
1923 A, 100 (Galeidæ).
Laaser, P. 1900 A, 480 (Mustelus).
Leriche, M. 1906 C, 165 (Carchariidæ).
Leunis and Ludwig 1883 A, 783 (Carchariidæ).
Rabinerson, A. 1925 A (Carchariidæ).
Radcliffe, L. 1916 A, 267 (Galeorhinidæ).
Rauther, M. 1913 A, 1098 (Carchariidæ).
Regan, C. T. 1906 A, 723, 746 (Carchariidæ).
Ridewood, W. G. 1895 B, 429 (Carchariidæ).
1921 A, 313, 330, 351, 395 (Carchariidæ).
Schlosser, M. 1917 A, 145 ("carchariiden").

Schmalhausen, J. J. 1913 A, 24 (Carchariidæ).
Steinman, G. 1907 A, 401 (Carchariidæ).
Stromer, E. 1905 C, 174, 180 (Carchariidæ).
Terra, P. 1911 A, 201 (Galeidæ, Carchariidæ).
Woodward, A. S. 1889 I, 12 (Carchariidæ).
Zittel and Koken 1911 A, 51 (Carchariidæ).
Zittel and Schlosser 1923 A, 56 (Carchariidæ).

GALEINÆ Jordan and Evermann.

Jordan and Evermann 1896 A, 27.

GALEUS Rafinesque. Type *Squalus mustelus* Linn.

Rafinesque, C. S. 1910, Car. Alc. Nuov. Gen., 13.
Hay, O. P. 1902 A, 312 (Galeorhinus).
Abel, O. 1919 A, 121, fig. 80.
Allis, E. P. 1913 A, 326.
1922 B, 198.
1923 B, 145.
Arldt, T. 1923 A, 486.
Beer, R. G. 1922 A, 471.
Bridge, T. W. 1904 A, 449.
Davidoff, M. 1879 A.
Dollo, L. 1904 C, 48.
Duméril, A. 1856 A, 126 ("milandre").
Edgeworth, F. H. 1926 A, 189.
Fahrenholz, C. 1915 A, 402.
Garman, S. 1913 A, 169 (Galeorhinus).
Gaupp, E. 1905 D, 884.
Gegenbaur, C. 1870 C, 407.
Gibian, A. 1912 A, 60.
Haswell, W. A. 1884 A, 84.
Hay, O. P. 1901 B, 67 (Galeorhinus).
Imms, A. D. 1905 A, 44.
Jacobshagen, E. 1923 A, 176.
Jordan, D. S. 1905 A, i, 541.
1917 A, 78.
1923 A, 100.
Jordan and Beal 1913 A, 247.
Jordan and Evermann 1917 A, 78.
Jordan and Gilbert 1882 A, 21 (Galeorhinus).
Leigh-Sharpe, W. H. 1921 A, 359, figs. 1-4 (Galeorhinus).
Leigh-Sharpe, W. H. 1926 A, 340.
Leydig, F. 1852 A.
Locy, W. A. 1894 A, 171.
Müller and Henle 1838 A, 36.
Nauck, E. T. 1926 B, 78, fig. 18.
Owen, R. 1845 B, 24, 35, 39.
1848 B, 87.
Priem, F. 1904 A, 291.
1908 B, 97.
Rabinerson, A. 1925 A, 520.
Radcliffe, L. 1916 A, 267, fig. 19.
Reynolds, S. H. 1897 A, 108, 118, fig. 15.
Ridewood, W. G. 1895 B, 432.
1899 A, 52.
Sečerov, S. 1911 A, 8, 10, pl. i.
Stannius, H. 1854 A.
Steinhard, O. 1903 A, 17, 34 (Galeorhinus).
Stromer, E. 1925 A, 20.
Tomes, C. S. 1898 B, 446, pl. xvii.
Weiler, W. 1922 A, 103, pls. i, ii.
Whitehouse, R. H. 1910 C, 138.
Williamson, W. C. 1851 A, 676.
Woodward, A. S. 1889 I, 12.
Zittel and Schlosser 1923 A, 56.

Galeus sp. indet.

Hay, O. P. 1902 A, 312 (Galeorhinus).
Woodward, A. S. 1889 D, 456 (Galeus).
Eocene; Alabama.

GALEORHININÆ Gill.

Gill, T. 1862 A, 399, 409 (earliest?).
Hay, O. P. 1902 A, 311.
Goodrich, E. S. 1909 A, 151 (Carchariinæ).
Jordan and Evermann 1896 A, 27.
Jordan and Gilbert 1882 A, 19.

GALEOCERDO Müller and Henle. Type *G. tigrinus* M. and H.

Hay, O. P. 1902 A, 311.
Agassiz, L. 1874 A, 131.
Allis, E. P. 1909 A, 202 (Galeus).
1915 A, 584 (Galeus).
1919 C, 257 (Galeus).
Ameghino, F. 1906 A, 186.
Bassani, F. 1891 A, 35.
Bronn, H. G. 1848 A, 52 (Galeocerdo); 524 (Galeus).
1849 A, 644.
Coulon, L. 1903 A, 129.
Dollo, L. 1904 C, 48.
Duméril, A. 1856 A, 129.
Eastman, C. R. 1901 B, 109.
Fowler, H. W. 1911 A, 66.
Garman, S. 1913 A, 148.
Giebel, C. G. 1855 A, 117.
Hay, O. P. 1901 B, 67.
Heilprin, A. 1887 A, 297, 300.
Jordan, D. S. 1905 A, i, 541; ii, 571.
1907 B, 198.
1919 B, 192.
1923 A, 100.
Jordan and Gilbert 1882 A, 21.
Jordan and Hannibal 1923 A, 38.
Klaatsch, H. 1890 A, 121.
Lawley, R. 1881 A, pls.
Leriche, M. 1906 C, 415.
1910 D, 295, fig. 95 (Galeus); 301 (Galeocerdo).
Mayer, P. 1886 A, 275.
Müller and Henle 1838 A, 36.
Priem, F. 1908 B, 80, 108.
Radcliffe, L. 1916 A, 250, 261, pl. xlii; text-fig. 16.
Regan, C. T. 1906 A, 736, fig. 116.
Ridewood, W. G. 1896 A, 383, 386.
1921 A, 353.

Stromer, E. 1905 C, 174, 180.
1925 A, 20.
Terra, P. 1911 A, 201, fig. 51.
Weidenreich, F. 1926 A, 46.
Weiler, W. 1922 A, 103, pl. i.
Winckler, T. C. 1876 A, 11.
Woodward, A. S. 1889 I, 12.
Zittel and Koken 1911 A, 51.
Zittel and Schlosser 1923 A, 56.

Galeocerdo aduncus Agassiz.

Hay, O. P. 1902 A, 311.
Ameghino, F. 1906 A, 185, 259.
1908 B, 485, figs. *o*, *u*.
Bassani, F. 1891 A, 36, pl. i, fig. 4; pl. ii, fig. 20.
Eastman, C. R. 1904 H, 88; pl. xxxii, fig. 11.
Fowler, H. W. 1911 A, 67, figs. 30, 31.
Gervais, P. 1852 A, explan. pl. lxxiv, fig. 8.
1859 A, 520, pl. lxxiv, fig. 8.
Jordan, D. S. 1910 B, 182.
Leriche, M. 1906 A, 308.
Priem, F. 1912 A, 215, 219, 228, 239.
Shattuck, G. B. 1904 A, xcvi.
Upper Cretaceous (Manasquan, etc.); New Jersey: Miocene (Calvert); Maryland: (Kirkwood); New Jersey.

Galeocerdo contortus Gibbes.

Hay, O. P. 1902 A, 311.
Ameghino, F. 1906 A, 182, pl. ii, figs. 26, 27.
Eastman, C. R. 1904 H, 87, pl. xxxii, fig. 9.
Fowler, H. W. 1911 A, 69, fig. 32.
Shattuck, G. B. 1904 A, xcvi.
Stromer, E. 1905 C, 176.
Upper Cretaceous (Manasquan); New Jersey: Miocene (Calvert and Choptank); Maryland.

Galeocerdo crassidens Cope.

Hay, O. P. 1902 A, 311.
Upper Cretaceous (Niobrara); Kansas.

Galeocerdo lævissimus Cope.

Hay, O. P. 1902 A, 311.
Eastman, C. R. 1904 H, 84, pl. xxxii, fig. 2 (Carcharias).
Shattuck, G. B. 1904 A, xcvi (Carcharias).
Miocene (Calvert); Maryland.

Galeocerdo latidens Agassiz.

Hay, O. P. 1902 A, 311.
Ameghino, F. 1906 A, 182, pl. ii, figs. 24, 25.
1908 B, 485, figs. *a*, *e*, *i*.
Coulon, L. 1903 A, 130.
Clark and Miller 1912 A, 117, 118.
Eastman, C. R. 1901 B, 109, pl. xiv, fig. 8.
1904 H, 88, pl. xxxii, fig. 10.
Fowler, H. W. 1911 A, 70, fig. 33.
Gervais, P. 1859 A, 520, pl. lxxiv, fig. 7.
Hopkins, F. V. 1870 A, 93.
1871 A, 13.
Leriche, M. 1905 A, 77, 136, 190, pl. viii, figs. 19-28.
Leriche, M. 1906 B, 353, 355.
1906 C, 417 pl. xi, figs. 19-28.
Priem, F. 1906 A, 202, fig. 6.
1908 B, pl. iv, fig. 10.
Sellards, E. H. 1913 A, pl. vii, fig. 16 ("shark").
1915 D, 81, 98, fig. 28 ("Galeocerdo"), (This species?).
Shattuck, G. B. 1904 A, xcvi.
Stromer, E. 1903 A, 33, pl. i, fig. 7.
1905 C, 175, pl. xvi, figs. 10-15.
Woodward, A. S. 1889 I, 12, figs. 31, 32.
Eocene; Louisiana: Eocene (Nanjemoy); Maryland: Miocene; New Jersey: (Calvert and Choptank); Maryland.

Galeocerdo minor Agassiz.

Hay, O. P. 1902 A, 311.
Ameghino, F. 1906 A, 259.
Bassani, F. 1891 A, 37.
Hopkins, F. V. 1871 A, 13.
Leriche, M. 1905 A, 77, 134, 190, 201, pl. viii, figs. 33-43 (Galeus).
1906 C, 418 (Galeus).
Priem, F. 1907 A, 317, figs. 1, 2 (Galeus).
Stromer, E. 1905 C, 175.
Tertiary; Europe: Eocene; Alabama, Louisiana.

Galeocerdo productus Agassiz.

Hay, O. P. 1902 A, 312.
Anderson, F. M. 1911 A, 101.
Blake, W. P. 1857 A, 171, 172, figs. 4, 5.
1866 A, 290.
Jordan, D. S. 1907 A, 101, 114, fig. 13; 110, figs. 4a-4c (This species?).
Jordan and Beal 1913 A, 245, 247.
Jordan and Gilbert 1919 A, 21.
Jordan and Hannibal 1923 A, 40 (Syn. of Gyrace occidentalis).
Leriche, M. 1908 C, 305 (G. productus Agassiz and G. productus Jordan 1907 A, 101, fig. 13 as syns. of G. aduncus).
Miocene (Monterey); California.

Galeocerdo subcrenatus Emmons.

Hay, O. P. 1902 A, 312.
North Carolina; formation unknown.

Galeocerdo triqueter Eastman.

Eastman, C. R. 1904 H, 89, pl. xxxii, fig. 12.
Shattuck, G. B. 1904 A, xcvi.
Miocene (Calvert); Maryland.

Galeocerdo sp. indet.

Hay, O. P. 1902 A, 312.
Cannon, G. L. 1890 B, 313, Upper Cretaceous (Niobrara); Colorado.
Gidley, J. W. 1927 E, 274. Pleistocene; Florida.
Hay, O. P. 1927 D, 274. Pleistocene; Florida.
Merrill, G. P. 1907 A, 11. Eocene; New Mexico.
Tuomey, M. 1848 A, 166, 180. Eocene; South Carolina.

GYRACE Jordan and Hannibal. Type *Scymnus occidentalis* Agassiz.

Jordan and Hannibal in Jordan, D. S. 1923 A, 100.
Jordan and Hannibal 1923 A, 38.

Gyrace occidentalis (Agassiz).

Hay, O. P. 1902 A, 314 (Scymnorhinus).
Anderson, F. M. 1911 A, 101 (Dalatias).
Blake, W. P. 1857 A, 172 (Scymnus).
Braus, H. 1899 A, 518 (Scymnus).
Jordan, D. S. 1907 A, 118 (Dalatias).
1919, in Jordan and Gilbert 1919 A, 17, 20, pl. vii, fig. G (Triakis beali).
Jordan, D. S. 1923 A, 100 (To Gyrace).
Jordan and Beal 1913 A, 245-253 (Dalatias).
Jordan and Gilbert 1919 A, 23, 62 (Scymnorhinus); 17, 20, pl. vii, fig. g (Triakis beali).
Jordan and Hannibal 1923 A, 40, 62, pl. ii, figs. *b-f, l, m, q, cc.*
Klaatsch, H. 1890 A, 107, pl. vi (Scymnus).
Leunis and Ludwig 1883 A, 787 (Scymnus).
Mayer, P. 1886 A, 250 (Scymnus).
Owen, R. 1866 A, 78 (Scymnus).
Sečerov, S. 1911 A, 8 (Scymnus).
Miocene (Monterey); California.

CARCHARHININÆ Jordan and Evermann.

Hay, O. P. 1902 A, 312.
Garman, S. 1913 A, 12 (Carcharinidæ).
Goodrich, E. S. 1909 A, 151 (Carcharinæ).
Mayer, P. 1886 A, 273, 275 (Carchariidæ).
Radcliffe, L. 1916 A, 250 (Carcharhinidæ).

CARCHARHINUS Blainville. Type *C. commersonianus* Blainville.

Hay, O. P. 1902 A, 312.
Ameghino, F. 1906 A, 182 (Carcharias).
Arldt, T. 1923 A, 486 (Carcharias).
Bridge, T. W. 1904 A, 448, 734 (Carcharias).
Bronn, H. G. 1849 A, 642 (Glyphis); 645 (Carcharias).
Chapman, F. 1918 A, 8 (Carcharias).
Davidoff, M. 1879 A (Carcharias).
Duméril, A. 1856 A, 124 ("requin").
Fahrenholz, C. 1915 A, 401 (Carcharias).
Fowler, H. W. 1911 A, 74 (Glyphis).
Garman, S. 1913 A, 4, 123 (Carcharinus).
Gegenbaur, C. 1870 B, 451, pl. xv, figs. 9, 10 (Carcharias).
1870 C, 405 (Carcharias).
Hay, O. P. 1901 B, 67.
Huber, O. 1901 A, 624, pl. xxvii (Carcharias).
Jordan, D. S. 1905 A, i, 542; ii, 561 (Carcharias).
1917 A, 95.
1923 A, 100.
1928 A, 1.
Jordan and Beal 1913 A, 248.
Jordan and Evermann 1917 A, 95.
Jordan and Gilbert 1882 A, 22.
Jordan and Hannibal 1923 A, 36.
Leriche, M. 1906 C, 413 (Carcharias).
Leunis and Ludwig 1883 A, 783 (Carcharias).
Mayer, P. 1886 A, 246 (Carcharias).
Müller and Henle 1838 A, 34 (Carcharias).
Priem, F. 1904 A, 290 (Carcharias, Aprionodon).
1908 B, 96 (Carcharias).
Rabinerson, A. 1925 A, 440, fig. 2; 493 (Carcharias).
Radcliffe, L. 1916 A, 250, 255, pls. xxxix-xli; text-figs. 12-14.
Ridewood, W. G. 1921 A, 342, 355 (Carcharias).
Rosenberg, E. 1887 A, 32 (Carcharias).
Stromer, E. 1905 C, 176, 181 (Carcharias).
Struck, W. 1915 A, 138, fig. 5 (Carcharias).
Tomes, C. S. 1898 B, 444, 449, pl. xviii (Carcharias).
1898 C, 344 (Carcharias).
White, J. W. 1905 A, 320 (Carcharias).
Williamson, W. C. 1851 A, 677, pl. xxxi, figs. 33-36.
Zittel and Koken 1911 A, 51.

Carcharhinus (Prionace) antiquus (Agassiz).

Hay, O. P. 1902 A, 312.
Anderson, F. M. 1911 A, 101 (Carcharias).
Blake, W. P. 1857 A, 172 (Prionodon).
1866 A, 290 (Prionodon).
Eastman, C. R. 1904 H, 85 (Prionodon).
Jordan, D. S. 1907 A, 103, fig. 5 (Carcharias); 105, fig. 4 (Galeus zygopterus?).
Jordan and Beal 1913 A, 245, 248 (C. antiquus); 245, 247, fig. *a* (Galeorhinus hannibali).
Jordan and Gilbert 1919 A, 21 (C. antiquus); 21, 62 (Galeorhinus hannibali).
Jordan and Hannibal 1923 A, 36, 62, pl. ii, figs. *c, k, j, p.*
Miocene; California.

Carcharhinus collatus (Cope).

Cope, E. D. in Eastman, C. R. 1904 H, 85 (Sphyrna).
Eastman, C. R. 1904 H, 85, pl. xxxii, figs. 3-5 (Carcharias).
Leriche, M. 1906 A, 305 (Carcharias. This species?).
Miocene (Calvert and Choptank); Maryland: Neocene; France.

Carcharhinus (Prionace) egertoni (Agassiz).

Hay, O. P. 1902 A, 312.
Ameghino, F. 1906 A, 182, 185, 259 (Carcharias).
Eastman, C. R. 1904 H, 84, pl. xxxii, fig. 1 (Carcharias).
Dall and Harris 1892 A, 73 (Galeocerdo).
Fowler, H. W. 1911 A, 75, fig. 36 (Glyphis).
Leriche, M. 1906 A, 306 (Carcharias).
Shattuck, G. B. 1904 A, xcvi [Carcharias (Prionodon)].

Stromer, E. 1905 C, 177, pl. xvi, figs. 17-19 (Prionodon).
Upper Cretaceous (Manasquan, etc.); New Jersey: Miocene (Calvert); Maryland: (Kirkwood); New Jersey.

Carcharhinus (Aprionodon) gibbesii (Woodward).

Hay, O. P. 1902 A, 313.
Ameghino, F. 1906 A, 185, 259 (Carcharias gibbesi).
Fowler, H. W. 1911 A, 75 (Aprionodon).
Priem, F. 1911 B, 336 (Carcharias).
Eocene; South Carolina, Alabama.

Carcharhinus incidens Eastman.

Eastman, C. R. 1904 H, 87, pl. xxxii, fig. 8 (Carcharias).
Shattuck, G. B. 1904 A, xcvi (Carcharias).
Middle Miocene (Calvert); Maryland.

Carcharhinus magdalenæ Jordan and Hannibal.

Jordan and Hannibal 1923 A, 38, 63, pl. ii, figs. *n, r, s;* pl. iii, figs. *aa, bb;* pl. vi, fig. *d.*
Hay, O. P. 1927 D, 174.
Miocene (Monterey): Pleistocene? (Lomita); California.

Carcharhinus (Prionace) tenuis (Agassiz).

Hay, O. P. 1902 A, 313.
Senonian; Switzerland: Eocene?; South Carolina.

Carcharhinus sp. indet.

Hay, O. P. 1902 A, 313. Eocene; Alabama.
Tuomey, M. 1848 A, 166 ("Glyphis"). Tertiary; South Carolina.

MICRODUS Emmons. Type *M. lævis* Emmons.

Hay, O. P. 1902 A, 313.
Jordan, D. S. 1923 A, 100.
The type is an object of uncertain relationships.

Microdus lævis Emmons.

Hay, O. P. 1902 A, 313.
Triassic; North Carolina.

HEMIPRISTIS Agassiz. Type *H. serra* Agassiz.

Hay, O. P. 1902 A, 313.
Arldt, T. 1923 A, 486.
Bassani, F. 1891 A, 38.
Bronn, H. G. 1848 A, 585.
1849 A, 645.
Coulon, L. 1903 A, 129.
Fowler, H. W. 1911 A, 71.
Giebel, C. G. 1855 A, 117.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1923 A, 100.
Jordan and Beal 1913 A, 248.
Jordan and Hannibal 1923 A, 40.
Klaatsch, H. 1890 A, 121.
Stefano, G. 1912 A, 409.
Stromer, E. 1905 C, 174, 180.
Zittel and Koken 1911 A, 51.
Zittel and Schlosser 1923 A, 56, fig. 80.

Hemipristis serra Agassiz.

Hay, O. P. 1902 A, 313.
Ameghino, F. 1906 A, 185, 259.
Bassani, F. 1891 A, 38, pl. i, fig. 15.
Blake, C. C. 1862 C, 316.
Clark and Miller 1912 A, 167, 168.
Coulon, L. 1903 A, 129 (H. serra, H. paucidens).
Dall, W. H. 1894 A, 297.
Dall and Harris 1892 A, 73 (Nemipristis, misprint).
Eastman, C. R. 1904 H, 90, pl. xxxii, figs. 13, 14.
Fowler, H. W. 1911 A, 71, figs. 34, 35.
Gervais, P. 1852 A, explan., pl. lxxiv.
1859 A, 519, pl. lxxiv.
Gorjanovič-Kramberger, D. 1891 A, 97.
Hay, O. P. 1922 B, 3.
Jordan, D. S. 1910 B, 182.
Jordan and Beal 1913 A, 248.
Jordan and Hannibal 1923 A, 40, 44 (Syn.? of H. heteropleurus).
Leriche, M. 1906 A, 309.
Mantell, G. A. 1844 A, 624, fig. 130.
Priem, F. 1912 A, 215, 219, 228, 239.
Sellards, E. H. 1913 A, pl. vii, fig. 12 ("shark").
1915 D, 99, fig. 26 ("Hemipristis").
Shattuck, G. B. 1904 A, xcvi.
Stefano, G. 1912 A, 410, pls. xii, xiv.
Stromer, E. 1905 C, 178.
Tuomey, M. 1848 A, 166, 180 ("Hemipristis").
Upper Cretaceous (Manasquan, etc.); New Jersey: Miocene (Kirkwood); New Jersey: (Calvert); Maryland, Virginia, South Carolina: Miocene; Europe.

Hemipristis chiconis Jordan.

Jordan, D. S. 1907 A, 105, fig. 7.
Jordan and Beal 1913 A, 245, 248.
Jordan and Hannibal 1923 A, 36, 61 (Notidanion?).
Cretaceous (Chico); California.

Hemipristis heteropleurus Agassiz.

Hay, O. P. 1902 A, 313.
Anderson, F. M. 1911 A, 101.
Blake, W. P. 1857 A, 171, 172, fig. 3.
1866 A, 290.
Jordan, D. S. 1907 A, 104, fig. 6.
1910 B, 182.
1919 B, 214.
Jordan and Beal 1913 A, 245, 248.
Jordan and Gilbert 1919 A, 21.
Jordan and Hannibal 1923 A, 40, 44, 62, pl. ii, figs. *u, v, aa, bb.*
Leriche, M. 1908 C, 305 (Syn. of H. serra).
Miocene (Monterey); California.

Hemipristis sp. indet.

Hay, O. P. 1902 A, 313. Eocene; South Carolina.
Sellards, E. H. 1915 D, 98, fig. 26. Pliocene (Bone Valley); Florida.

SPHYRNIDÆ Gill.

Gill, T. 1872 B, 24.
Hay, O. P. 1902 A, 314 (Sphyninæ).
Bridge, T. W. 1904 A, 449.
Fowler, H. W. 1911 A, 77.
Garman, S. 1913 A, 155 (Cestraciontidæ).
Goodrich, E. S. 1909 A, 151 (Sphyninæ).
Huber, O. 1901 A, 626 (Zygænidæ).
Jordan, D. S. 1905 A, i, 543.
1907 B, 200, 758.
1923 A, 101.
Jordan and Gilbert 1882 A, 25.
Kingsley, J. S. 1885 A, 80.
Radcliffe, L. 1916 A, 263 (Cestraciontidæ).
Regan, C. T. 1906 A, 746 (Sphyninæ).
Roth, W. 1911 A, 536 (Zygænidæ).

SPHYRNA Rafinesque. Type *Squalus zygæna* Linn.

Rafinesque, C. S. 1910, Indice Ittiol. Sicil., 46, 60.
Hay, O. P. 1902 A, 314.
Abel, O. 1912 F, 518.
Allis, E. P. 1915 A, 587.
Arldt, T. 1923 A, 486.
Bassani, F. 1891 A, 40.
Braus, H. 1906 A, 182.
Bridge, T. W. 1904 A, 449, 756.
Bronn, H. G. 1848 B, 1171.
1849 A, 645.
Cunningham, J. T. 1912 A, 284.
Daniel, J. F. 1922 A, figs. 62, 96 (Zygæna).
Duméril, A. 1856 A, 123 ("marteau").
Eastman, C. R. 1901 B, 109.
Fahrenholz, C. 1915 A, 402 (Zygæna).
Fowler, H. W. 1911 A, 77.
Fürbringer, K. 1903 A, 385.
Garman, S. 1913 A, 155 (Cestracion).
Giebel, C. G. 1855 A, 116.
Gudger, E. W. 1907 A, 1005.
Hay, O. P. 1901 B, 67.
Huber, O. 1901 A, 626 (Zygæna).
Imms, A. D. 1905 A, 43.
Jordan, D. S. 1923 A, 101.
Jordan and Evermann 1917 A, 82.
Jordan and Gilbert 1882 A, 26, 874.
Kingsley, J. S. 1925 A, 226, fig. 238 (Zygæna).
Köstlin, O. 1844 A (Zygæna).
Leriche, M. 1910 D, 298, fig. 96.
Leunis and Ludwig 1883 A, 783 (Zygæna).
Lloyd and Sheppard 1922 A, 971, figs. 1-7 (Zygæna).
Mayer, P. 1886 A, 235 (Zygæna).
Müller and Henle 1838 A, 35 (Zygæna).
Owen, R. 1845 B, 30 (Zygæna).
Rabinerson, A. 1925 A, 435, fig. 1; 491, fig. 3 (Zygæna).
Rabl, C. 1901 A, 477.
Radcliffe, L. 1916 A, 263, pls. xliii, xliv, text-figs. 17, 18 (Cestracion).
Ridewood, W. G. 1899 A, 49 (Zygæna).
1921 A, 355, fig. 8.
Roth, W. 1911 A, 536, pls. vi, vii (Zygæna).
Sauvage, E. 1867 A, 124 (Sphyrna).
Sečerov, S. 1911 A, 8, 11, pl. i (Zygæna).
Smith, H. M. 1916 A, 347.
Stannius, H. 1854 A.
Valenciennes, A. 1822 A, 222 (Zygæna).
Wagner, R. 1843 A (Zygæna).

Sphyrna gibbesii Hay.

Hay, O. P. 1902 A, 314.
Fowler, H. W. 1911 A, 78, fig. 37.
Upper Cretaceous; New Jersey.

Sphyrna lata Agassiz.

Hay, O. P. 1902 A, 314.
Tertiary; Virginia: Eocene; South Carolina.
Identification doubtful.

Sphyrna magna Cope.

Hay, O. P. 1902 A, 314.
Eastman, C. R. 1904 H, 86, pl. xxxii, figs. 6, 7 (Carcharias).
Shattuck, G. B. 1904 A, xcvi (Carcharias).
Miocene (Calvert); Maryland.

Sphyrna prisca Agassiz.

Hay, O. P. 1902 A, 314.
Ameghino, F. 1906 A, 185, 259 (Sphirna).
Bassani, F. 1891 A, 41, pl. ii, fig. 19.
Clark and Miller 1912 A, 117, 118.
Eastman, C. R. 1901 B, 110, pl. xiv, figs. 7a, 7b.
1904 H, 91, pl. xxxii, fig. 15.
Fowler, H. W. 1911 A, 75, 78, fig. 38.
Gorjanovič-Kramberger, D. 1891 A, 97, pl. viii, fig. 17 (This species?).
Jordan, D. S. 1907 B, 200.
Leriche, M. 1906 A, 307.
1907 A, 354, pl. iii, figs. 5-8.
Priem, F. 1904 A, 289, figs. 6, 7.
1912 A, 216, 217, 228, 240, fig. 1.
1914 A, 123, text-fig. 12.
Sauvage, E. 1867 A, 125 (Sphyrha).
Shattuck, G. B. 1904 A, xcvi.
Miocene; Europe: Eocene; South Carolina: Eocene (Aquia); Maryland: Miocene (Calvert); Maryland.

Superfamily SQUALOIDÆ, new form.

Arldt, T. 1923 A, 486 ("squaloiden").
Garman, S. 1913 A, 13 (Squaloidei).
Goodrich, E. S. 1909 A, 151 (Squaliformes).
Hay, O. P. 1902 A, 314 (Squaloidea).
Jaekel, O. 1911 A, 62 (Spinacidi).
Jordan, D. S. 1905 A, i, 543; ii, 595 (Tectospondyli).
Jordan, D. S. 1907 B, 200, 758 (Tectospondyli); 202 (Cyclospondyli).
1923 A, 101 (Squaloidei).
Jordan and Gilbert 1882 A, 12 (Scymnoidea).
Rauther, M. 1913 A, 1098 (Squaloidei).
Regan, C. T. 1906 A, 723 (Squaloidei).
Stromer, E. 1905 C, 164 (Squaloidei).
Van Wijhe, J. W. 1922 A, 291 (Squaloidei).

SQUALIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 99.
Hay, O. P. 1902 A, 314 (Somniosidæ, in part).
Abel, O. 1919 A, 123 (Spinacidæ).
Allis, E. P. 1914 A, 359 (Spinacidæ).
1923 B (Spinacidæ, Acanthias).
Arldt, T. 1923 A, 487 ("squaliden").
Bridge, T. W. 1904 A, 454 (Spinacidæ).
Brohmer, P. 1908 A, 25 (Spinax).
Gill, T. 1905 A, 658.
Goodrich, E. S. 1909 A, 151 (Spinacidæ).
Günther, A. C. 1870 A, 417 (Spinacidæ).
1880 A, 330 (Spinacidæ).
Jaekel, O. 1911 A, 62 (Spinacidæ).
Jordan, D. S. 1905, i, 545; ii, 598.
1907 B, 202.
1923 A, 101.
Laaser, P. 1900 A, 480, figs. 1-8 (Spinax, Acanthias).
Rabinerson, A. 1925 A, 444, 517 ("spinaciden").
Radcliffe, L. 1916 A, 267.
Rauther, M. 1913 A, 1098 (Spinacidæ).
Regan, C. T. 1906 A, 723.
1908 B, 39.
Ridewood, W. G. 1921 A, 371 (Squalinæ).
Schlosser, M. 1917 A, 139 ("spinaciden").
Sewertzoff, A. N. 1923 B (Spinaceidæ).
Stannius, H. 1854 A.
Woodward, A. S. 1889 D, 30 (Spinacidæ).
1898 B, 50 (Spinacidæ).
Zittel, K. A. 1890 A, 87 (Spinacidæ).
Zittel and Koken 1911 A, 49 (Spinacidæ).
Zittel and Schlosser 1923 A, 55 (Spinacidæ).

SQUALUS Linnæus. Type *S. acanthias* Linn.

Linnæus, C. 1758 A, 233.
Allis, E. P. 1920 A, 222, pls. xxiii-xxv (Acanthias).
1922 C, 2.
1926 A, 164 (Acanthias).
Arldt, T. 1923 A, 487.
Beer, G. R. 1922 A, 457, figs. 1-13.
1924 B, 53.
1926 A, 275, 285, figs. 8-10, 125-128.
Bridge, T. 1904 A, 455, 729 (Acanthias).
Daniel, J. F. 1922 A, many figs. (Squalus, Acanthias).
Edgeworth, F. H. 1925 A, 237, figs. 21-23 (Acanthias).
Evans, H. M. 1923 A, 8, 27, pl. i, fig. 4; pl. ii, figs. 5, 6; text-figs. 5-7 (Acanthias).
Gaupp, E. 1905 D, 875 (Acanthias).
Gill, T. 1862, Proc. Acad. Nat. Sci. Phila., 496 (Entoxychirus).
Goodrich, E. S. 1918 A, 13 (Acanthias).
Günther, A. C. 1880 A, 331 (Acanthias).
Haller, G. 1923 A, 96, figs. 4-6, 9-11, 15-17, 19 (Acanthias).
1924 A, 313, fig.
1926 A, 452, fig. 2 (Acanthias).
Hommes, J. H. 1924 A, 23, 29, fig. 19 (Acanthias).
Jordan, D. S. 1905 A, i, 545.
1907 B, 202.
1917 A, 11.
Jordan and Evermann 1896 A, 53.
Jordan and Gilbert 1882 A, 17.
Jordan and Hannibal 1923 A, 58.
Kingsbury, B. F. 1926 A, 89, 98, 104.
Kingsbury and Adelmann 1924 A, 344, figs. 3, 4.
Leigh-Sharpe, W. H. 1926 A, 340 (Acanthias).
Lubosch, W. 1909 A, 2, figs. 1, 2, 7 (Acanthias).
Mori, O. 1924 A, 389 (Acanthias).
Nauck, E. T. 1926 B, 30, figs. 1-5, 17, 18 (Acanthias).
Norman, E. W. 1926 A, 412 (Acanthias).
Owen, R. 1848 B, 87 (Acanthias).
1866 A, 32, 35, 486 (Acanthias).
Pehrson, T. 1922 A, 9 (Acanthias).
Rabinerson, A. 1925 A, 437, fig. 2; 514, fig. 1.
Rafinesque, C. 1810, Caratteri, etc., 13.
Risso, A. 1826, Europe Merid, 1311 (Acanthias).
Sagemehl, M. 1883 A, 220 (Acanthias).
Sewertzoff and Disler 1924 A, 347 (Acanthias).
Stadtmüller, F. 1926 A, 160, fig. 6 (Acanthias).
Stannius, H. 1854 A (Spinax).
Van Wijhe, J. W. 1922 A, 271-278, pl. xi, text-figs. 1-4.
Woodward, A. S. 1889 D, 31 (Acanthias).
Ziegler, H. E. 1923 A, 68, figs. 6, 7 (Acanthias).
Zittel, K. A. 1890 A, 87 (Acanthias).
Zittel and Koken 1911 A, 50, fig. 71.
Zittel and Schlosser 1923 A, 55, fig. 76 (Acanthias).

Squalus serriculus Jordan and Hannibal.

Jordan and Hannibal 1923 A, 58, 62, pl. iii, figs. *m*, *p*.
Miocene (Monterey); California.

SCYMNORHINIDÆ Jordan and J. Z. Gilbert.

Jordan and J. Z. Gilbert 1919 A, 23 (earliest?).
Hay, O. P. 1902 A, 314 (Somniosidæ).
Abel, O. 1919 A, 123 (Spinacidæ).
Allis, E. P. 1914 A, 359 (Spinacidæ).
Bonaparte, C. L. 1831 A, 99 (Included all existing sharks).
1840 A, 45 (Scymni).
Bridge, T. W. 1904 A, 454 (Spinacidæ).
Duméril, A. 1856 A, 135 (Scymni).
Garman, S. 1913 A, 242 (Echinorhinidæ).
Gill, T. 1905 A, 658 (Squalidæ).
Goodrich, E. S. 1909 A, 151 (Spinacidæ).
Huber, O. 1901 A, 604 (Scymnidæ).
Jaekel, O. 1911 A, 62 (Spinacidæ).
Jordan, D. S. 1905 A, i, 546 (Dalatiidæ); 547 (Echinorhinidæ).
1907 B, 203, 758 (Dalatiidæ); 204, 758 (Echinorhinidæ).
1923 A, 102.
Jordan and C. H. Gilbert 1882 A, 13 (Scymnidæ); 15 (Spinacidæ).
Jordan and J. Z. Gilbert 1919 A, 23 (Scymnorhinidæ, Echinorhinidæ).
Laaser, P. 1900 A, 480, figs. 1-8 (Spinax, Acanthias).
Radcliffe, L. 1916 A, 267 (Squalidæ).

Roth, W. 1911 A, 524 (Scymnidæ); 530 (Echinorhinidæ).
Stannius, H. 1854 A (Spinaces, Scymnoidei).
Zittel and Schlosser 1923 A, 56, figs. 3, 78 (Scyllidæ).

Scymnorhinus Bonaparte. Type *Scymnus lichia* Cuvier.

At present no American species is included in this genus, *S. occidentalis* being referred to *Gyrace*.

Hay, O. P. 1902 A, 314.
Allis, E. P. 1909 A, 202 (Scymnus).
1914 A, 359 (Scymnus).
1922 B, 197 (Scymnus).
1923 B, 125 (Scymnus).
Arldt, T. 1923 A, 488 (Scymnus).
Beer, G. R. 1926 A, 268, fig. 1 (Scymnus).
Braus, H. 1901 B, 191 (Scymnus).
Bronn, H. G. 1849 A, 641 (Scymnus).
Daniel, J. F. 1922 A, fig. 107 (Scymnus).
Derjugin, K. M. 1909 A, (Scymnus).
Fürbringer, K. 1903 A, 366 (Scymnus).
1904 B, 464, fig. 10 (Scymnus).
Garman, S. 1913 A, 236.
Gaupp, E. 1905 D, 875 (Scymnus).
Goodrich, E. S. 1909 A, 80, 128, fig. 53.
Haswell, W. A. 1884 A, 77 (Scymnus).
Hay, O. P. 1901 A, 67.
Hoffmann, L. 1912 A, 278 (Scymnus).
Huber, O. 1901 A, 604, pl. xxvii (Scymnus).
Ihering, H. 1878 A, 74 (Scymnus).
Jordan, D. S. 1905 A, i, 546 (Dalatias).
1907 B, 203 (Dalatias).
1919 B, 225.
1923 A, 102.
Jordan and Gilbert 1919 A.
1919 B.
Klaatsch, H. 1890 A, 107, pl. vi (Scymnus).
Lakjer, T. 1927 A, 221, fig. 79 (Scymnus).
Leigh-Sharpe, W. H. 1926 A, 314, 349 (Scymnus).
Leriche, M. 1906 C, 421 (Scymnus).
Leydig, F. 1852 A (Scymnus).
Luther, A. 1909 A, 21.
Müller and Henle 1838 A, 89.
Owen, R. 1839 G, 213 (Scymnus).
1845 B, 25, 31, 34, pl. iv, fig. 3 (Scymnus).
1866 A, 35, 78, 373, fig. 63 (Scymnus).
Rabinerson, A. 1925 A, 437, fig. 2; 514, fig. 1 (Scymnus).
Rauther, M. 1913 A, 1063, fig. 6 (Scymnus).
Regan, C. T. 1908 B, 40, 54.
Ridewood, W. G. 1895 B, 429.
1899 A, 47 (Scymnus).
1921 A, 373.
Roth, W. 1911 A, 524, pl. vi, fig. 5 (Scymnus).
Sewertzoff, A. N. 1923 B, fig. 1 (Scymnus).
Stannius, H. 1854 A (Scymnus).
Stromer, E. 1925 A, 20 (Scymnus).
Van Wijhe, J. W. 1922 A, 291 (Scymnus).
Versluys, J. 1922 B, 98 (Scymnus).
Zittel and Schlosser 1923 A, 55, figs. 5, 77 (Scymnus).

Echinorhinus Blainville. Type *Squalus spinosus* Gmelin.

Hay, O. P. 1902 A, 315.
Arldt, T. 1923 A, 488.
Blake, W. P. 1857 A, 172.
Fürbringer, K. 1903 A, 367.
Garman, S. 1913 A, 243.
Gaupp, E. 1905 D, 891, 894.
Hay, O. P. 1901 B, 67
Jordan, D. S. 1923 A, 102.
Jordan and Gilbert 1882 A, 14.
Jordan and Hannibal 1923 A, 58.
Müller and Henle 1838 A, 89 (Echinarrhinus).
Regan, C. T. 1908 B, 39, 41.
Ridewood, W. G. 1899 B, 346, fig.
1921 A, 326, 373, fig. 23.
Stannius, H. 1854 A.
Van Wijhe, J. W. 1922 A, 291.

Echinorhinus blakei Agassiz.

Hay, O. P. 1902 A, 315.
Blake, W. P. 1857 A, 172.
Jordan, D. S. 1907 A, 119.
Jordan and Beal 1913 A, 253.
Jordan and Gilbert 1919 A, 23.
Jordan and Hannibal 1923 A, 57, pl. iv, figs. *c*, *d*.
Miocene (Monterey); California.

Suborder Rajiformes Goodrich.

Goodrich, E. S. 1909 A, viii, 153.
Hay, O. P. 1902 A, 315 (Rajæ).
Agassiz, L. 1844 D, 142 ("rayes").
1844 E, 332 ("rays").
1854 A, 4 ("rays").
Allis, E. P. 1905 A, 475 (Batoidei).
1913 A, 327 (Batoidei).
1915 A, (Batoidei).
1918 B, 263 (Batoidei).
1923 B, 140 (Batoidei).
1925 A, 76 (Batoidei).
Anonymous, 1898 A, 373 (Batoidea).
Arldt, T. 1907 D, 146 (Batoidei).
1923 A, 488.
Backman, G. 1913 A (Batoidei).
1915 A (Rajæ).
Beer, G. R. 1924 B, 60 (Batoidea).
Bessels, E. 1869 A, 153 ("rochen").
Beyer, H. 1907 A, 266 ("rochen").
Boas, J. E. V. 1914 B, 538 ("rochen").
Bonaparte, C. L. 1833 A, 1203 (Raidæ).
1838 C, 197, 201 (Rajidæ).
Braus, H. 1899 A ("rochen").
Bridge, T. W. 1904 A, 457 (Batoidei).
1878 A, 706 (Batoidei).
Brohl, E. 1909 A, 347 ("rochen").
Bruch, C. 1862 A, 79 ("rochen").
Cunningham, J. T. 1912 A, 246 (Batoidei).
Cuvier, G. 1805 A ("raies").
Dana, J. D. 1863 B, 317 ("rays").
Dean, B. 1900 A, 22 (Batoidei).
Dohrn, A. 1884 A ("rochen").

Dollo, L. 1889 E, 152 ("raies").
1904 C, 47 ("batoïdes").
Duméril, A. 1856 A, 137 ("raies").
Eichwald, E. 1832 A, 878 ("rochen").
Eimer, G. H. F. 1901 A, 41 (Raji).
Fahrenholz, C. 1915 A, 394, 404 ("rochen").
Fitzinger, L. J. 1873 A, 56 (Hypochismata).
Fowler, H. W. 1911 A, 80 (Batoidei).
Fürbringer, M. 1902 A ("rochen").
1903 A, 623 ("rochen").
Garman, S. 1904 A, 246, 269 (Platosomia).
1913 A, 10, 257.
Gaupp, E. 1905 D, 868 ("rochen").
Gegenbaur, C. 1870 C, 410 ("rochen").
Geoffroy, St. Hilaire, E. F. 1807 C, 91 ("raies").
Giebel, C. G. 1855 A, 117 (Rajacei).
Gill, T. 1905 A, 657 (Batoidei).
Goodrich, E. S. 1909 A, 153 (Rajiformes).
Greene, J. R. 1861 A, 227 (Raiidæ).
Gregory, W. K. 1907 D, 446 (Rajæ).
Haeckel, E. 1868 A, 443 (Rajæ).
1873 A, 516 (Rajacei).
Haller, G. 1923 A, 101, figs. 2, 13 ("rochen").
1926 A, 453 ("rochen").
Hilzheimer, M. 1913 A, 470 (Batoidei).
Hoeven, J. 1822 A (Rajæ).
Humphreys, J. 1908 A, 11 ("rays").
Imms, A. D. 1905 A, 45 (Batoidei).
Jaekel, O. 1911 A, 64 (Rhinoraji).
1913 C, 36 ("rochen").
Jordan, D. S. 1905 A, i, 519, 549 (Batoidei).
1907 B, 206, 759 (Batoidei).
1923 A, 102 (Batoidei).
Jordan and Gilbert 1882 A, 36 (Raiae).
Kehrer, F. A. 1896 A, 347 ("rochen").
Killian, G. 1891 A, 103, fig. 25.
Kingsley, J. S. 1885 A, 84 (Raiae).
Köstlin, O. 1844 A, 425 ("rochen").
Krivetski, A. 1917 A, 19 ("raies").
Lavocat, A. 1885 A, 32 ("raies").
1896 B, 194 ("raies").
Leigh-Sharpe, W. H. 1926 A, 341 (Batoidei).
Leunis and Ludwig 1883 A, 788 (Batoidei).
Lönnberg, W. 1902 A (Rajidæ).
Lubosch, W. 1909 A, 4 ("rochen").
Lütken, C. 1868 C (Rajae).
M'Donnell, R. 1864 A, 163 ("rays").
Mantell, G. A. 1844 A, 629 ("rays").
Meckel, J. F. 1825 A ("rochen").
Meek, A. 1916 A, 41 (Batoidei).
Müller, J. 1845 A, 137 (Rajidæ).
Müller and Henle 1838 A, 90 (Raiæ).
Owen, R. 1845 B, 43 (Raiidæ).
1866 A, 13 (Batides).
Parker and Haswell 1897 A, 156 (Rajida).
Pompeckj, J. F. 1913 A, 1129 (Batoïdei).
Probst, J. 1886 B, 301 ("rochen").
Rabl, C. 1892 A, 131 (Torpedo).
1901 A, 484 (Rajae).
Rafinesque, C. S. 1815 A, 93 (Platosomia).
Rauther, M. 1913 A, 1098 (Batoidei).
Regan, C. T. 1906 A, 723, 752 (Hypotremata).
Reichert, K. B. 1849 A, 502 ("rochen").
Ridewood, W. G. 1899 A, 52 ("rays").
1921 A, 313 (Narcobatoidei; Batoidei).
Röse, C. 1892 F, 399 ("rochen").
1897 A, 58 ("rochen").
Ryder, J. 1886 A, 72, 77 (Raiae).
Sabatier, A. 1898 A, 930 ("raies").
Schauinsland, H. 1906 A, 393 ("rajiden").
Schlosser, M. 1917 A, 142 ("rochen").
Schœnichen, W. 1900 A, 502 ("rochen").
Sewertzoff, A. 1899 A, 197, 393 ("rochen").
1926 D, 83 (Batoidei).
Solger, B. 1880 B, 476 ("rochen").
Sonies, F. 1907 A, 404 ("rochen").
Steinmann, G. 1907 A, 404 (Batoidei).
Stephan, P. 1900 A, 311 ("raies").
Stromer, E. 1905 H, 216 ("rochen").
1912 A, 20 (Batoidei).
Wagner, R. 1843 A ("rochen").
Weber, E. H. 1821 A, 1060.
Wilbrand, J. B. 1824 A, 983 ("rochen").
Williamson, W. C. 1851 A, 669 ("rays").
Woodward, A. S. 1898 B, 40 (Batoidei).
1922 C, 74 (Raii).
Zittel and Schlosser 1923 A, 72 (Masticura).

Superfamily TAMIOBATOIDÆ, new name.

TAMIOBATIDÆ Hay.

Hay, O. P. 1902 A, 315.
Abel, O. 1919 A, 133.
Arldt, T. 1923 A, 488 ("tamiobatiden").
Bridge, T. W. 1904 A, 462.
Gregory, W. K. 1907 D, 446.
Hay, O. P. 1901 B, 67.
Jordan, D. S. 1905 A, i, 532, 551.
1907 B, 208, 758.
1923 A, 95.
Zittel and Woodward 1902 A, 41.

TAMIOBATIS Eastman. Type *T. vetustus* Eastman.

Hay, O. P. 1902 A, 315.
Abel, O. 1919 A, 133.
Arldt, T. 1923 A, 488.
Eastman, C. R. 1902 B, 71.
1903 B, 170.
1907 B, 65
Hay, O. P. 1901 B, 67, 73.
Jordan, D. S. 1923 A, 95.
Stromer, E. 1905 F, 477.
Trouessart, E. L. 1898 B, 8.

Tamiobatis vetustus Eastman.

Hay, O. P. 1902 A, 315.
Arldt, T. 1923 A, 488 (T. robustus).
Bridge, T. W. 1904 A, 462.
Dames, W. 1899 F, 555.
Dean, B. 1909 C, 258.
Eastman, C. R. 1907 B, 19.
1908 A, 279.
Jordan, D. S. 1905 A, i, 551.
1907 B, 208.
Pompeckj, J. F. 1913 A, 1129.
Merrill, G. P. 1907 A, 20.
Devonian (Middle or Upper); Kentucky.

Superfamily SQUATINOIDÆ, new form.

Gill, T. 1882 A, 967 (Squatinoidea).
1885 A, lxiv (Rhinæ).
1905 A, i, 547 (Rhinæ).
Gill, T. 1907 B, 204 (Rhinæ).
Jordan, D. S. 1923 A, 102 (Squatinoidei).

SQUATINIDÆ Owen.

Owen, R. 1868 A, 909 (Earliest?).
Arldt, T. 1907 D, 283.
1923 A, 488 ("squatiniden").
Bridge, T. W. 1904 A, 456 (Rhinidæ).
Dollo, L. 1889 F, 340.
Duméril, A. 1856 A, 136 (Squatinæ).
1865 A, 462 (Rhinæ).
Fitzinger, L. J. 1873 A, 56 (Squatinæ).
Gill, T. 1872 C, 23.
1882 A, 967.
1885 A, lxiv.
Goodrich, E. S. 1909 A, 156.
Günther, A. 1870 A, 430 (Rhinidæ).
Hasse, C. 1877 A, 329 ("Fam. Squatina").
Hennig, E. 1921 B, 117.
Hoernes, R. 1886 A, 544.
Huber, O. 1901 A (Rhinidæ).
Jordan, D. S. 1905 A, i, 547; ii, 593.
1907 B, 204, 759.
1923 A, 102.
Jordan and Gilbert 1882 A, 35.
Kingsley, J. S. 1885 A, 84.
Lavocat, A. 1896 B, 196 ("squatines").
Leunis and Ludwig 1883 A, 788 (Rhinidæ).
Mayer, P. 1886 A, 278.
Müller and Henle 1837 A, 399 (Squatinæ).
Owen, R. 1866 A, 13 (Squatinæ).
Pompeckj, J. F. 1913 A, 1127, 1129.
Regan, C. T. 1906 A, 723, 746, 751.
Ridewood, W. G. 1921 A, 344, 376, 395.
Schlosser, M. 1917 A, 137, 139 ("squatiniden").
Stannius, H. 1854 A, 3, seq. (Squatinæ).
Steinmann, G. 1907 A, 402.
Terra, P. 1911 A, 200.
Van Wijhe, J. W. 1922 A, 291.
Weiler, W. 1922 A, 93.
Zittel and Koken 1911 A, 64.
Zittel and Schlosser 1923 A, 69.
Zittel and Woodward 1902 A, 39.

SQUATINA Duméril. Type *S. angelus* Duméril.

Duméril, A. M. C. 1806 A, 102, 342.
Abel, O. 1906 C, 82.
1912 F, 436, fig. 317 (Rhina).
1919 A, 27, 124, figs. 86, 87 (Rhina).
1920 A, 327 (Rhina).
Allis, E. P. 1913 A, 325.
1923 B, 134 (Rhina).
Arldt, T. 1923 A, 488.
Bassani, F. 1891 A, 44.
Bridge, T. W. 1904 A, 457 (Rhina).
Bronn, H. G. 1848 B, 1197.
1849 A, 641.
Cuvier, G. 1814 A, 77 (Squalus).
1815 A, 122 (Squalus squatina).
Daniel, J. F. 1922 A, fig. 16.
Davidoff, M. 1879 A.
Dollo, L. 1889 F, 336.
Drevermann, F. 1910 B, 191, pl.
Duméril, A. 1856 A, 124 ("ange").
1865 A, 463 (Rhina).
Eastman, C. R. 1904 H, 71.
Edgeworth, F. H. 1926 A, 189.
Fraas, O. 1854 A, 782, pls. xxvii-xxix.
Fuchs, H. 1907 C, 26.
Garman, S. 1913 A, 250 (Rhina).
Gaupp, E. 1905 D, 874.
Gegenbaur, C. 1867 B, 410.
1870 B, 451.
1870 C, 414.
Giebel, C. G. 1855 A, 114.
Goette, A. 1878 A, 12.
Gregory, W. K. 1904 A, 56, 58.
Günther, A. C. 1870 A, 430 (Rhina).
Hasse, C. 1877 A, 328.
1878 A, 169.
Haswell, W. A. 1884 A, 73.
Heilprin, A. 1887 A, 300.
Hennig, E. 1921 B, 117.
Huxley, T. H. 1863 F, 373, figs. 32, 33.
1876 E, 115.
Jaekel, O. 1899 A, 277 (Rhina).
Jordan, D. S. 1905 A, i, 548.
1907 B, 205.
1917 A, 75.
1923 A, 102.
Jordan and Beal 1913 A, 254.
Jordan and Evermann 1917 A, 75.
Jordan and Gilbert 1882 A, 35.
Jordan and Hannibal 1923 A, 58.
Kesteven, H. L. 1922 A, 315.
1926 A, 136, figs. 4-6.
Kingsley, J. S. 1912 B, 77, fig. 75.
1925 A, 30, 67, figs. 31, 72.
Kner, R. 1860 B, 816.
Köstlin, O. 1844 A.
Leigh-Sharpe, W. H. 1926 A, 341 (Rhina).
Leriche, M. 1906 C, 422.
1908 A, 230, pl. iii, figs. 1-5, text-fig. 1.
Leunis and Ludwig 1883 A, 788 (Rhina).
M'Donnell, R. 1864 A, 167 ("angel-fish").
Marck, W. 1885 A, 262, pl. xxv.
Mayer, P. 1886 A, 239, 278.
Meckel, J. F. 1825 A.
Miller, H. 1851 A, 92.
Mivart, St. G. 1871 B, 391, pl. liii, fig. 5.
1878 B, 332.
Müller and Henle 1837 A, 399.
1837 B, 399.
1838 A, 89.
Newton, E. T. 1891 A, 112, pl. ix, figs. 11-11c.
Norman, E. W. 1926 A, 449, fig. 55.
Owen, R. 1845 B, 43, 50, pl. x, fig. 2.
1848 B, 87.
1866 A, 78.
1868 A, 909.
Pompeckj, J. F. 1913 A, 1127, fig. 30.

Priem, F. 1908 B, 76, 92.
Probst, J. 1886 B, 304.
Rabinerson, A. 1925 A, 442, fig. 3 (Squatina); 516, fig. 1 (Rhina).
Rabl, C. 1901 A, 523.
Regan, C. T. 1906 A, 751, figs. 115, 121.
Reis, O. M. 1893 A, 504.
Ridewood, W. G. 1895 B, 431.
1921 A, 315, 326, 376, fig. 25.
Schauinsland, H. 1906 A, 407.
Schmalhausen, J. J. 1913 A, 10.
Sečerov, S. 1911 A, 10, pl. i.
Stannius, H. 1854 A, 81, 82, 88, 98.
Steinhard, O. 1903 A, 20.
Storms, R. 1891 A, 147.
1894 A, 75, pl. vi.
Ussow, S. 1900 A, 233.
Van Wijhe, J. W. 1922 A, 291.
Versluys, J. 1922 B, 98.
Weiler, W. 1922 A, 93, pls. i-iii.
1889 I, 2, figs. 3-5.
Woodward, A. S. 1888 L, 144, pl. vii, figs. 1-6.
Woodward, A. S. 1898 F, 289, pl. x; text-fig. 1.
1912 A (1911), 223.
Zittel and Koken 1911 A, 64.
Zittel and Schlosser 1923 A, 69, fig. 116.
Zittel and Woodward 1902 A, 39.

Squatina lerichei Jordan and Beal.

Jordan and Beal 1913 A, 253, fig. B.
Jordan and Hannibal 1923 A, 59, pl. iii, figs. *b, c, i, j.*
Miocene (Monterey); California.

Squatina occidentalis Eastman.

Eastman, C. R. 1904 H, 71, pl. xxviii, fig. 1.
Shattuck, G. B. 1904 A, xcvi.
Miocene (Calvert); Maryland.

Squatina sp. indet.

Hussakof, L. 1908 A, 36. Eocene; South Carolina.

Superfamily RAJOIDÆ, new form.

Hay, O. P. 1902 A, 315 (Pachyura).
Bridge, T. W. 1904 A, 457 (Batoidei).
Fowler, H. W. 1911 A, 80 (Sarcura).
Garman, S. 1913 A, 257 (Rhinobatoidea); 258, 259 (Raioidei).
Gill, T. 1873 F, 12 (Raiaodiæ).
Goodrich, E. S. 1909 A, 159 (Rhinoraji).
Jordan, D. S. 1905 A, i, 519, 549 (Batoidei).
Jordan, D. S. 1907 B, 206 (Bathoidei).
1923 A, 102 (Sarcura).
Pompeckj, J. F. 1913 A, 1129 (Rhinoraji).
Rauther, M. 1913 A, 1098 (Rhinoraji).
Regan, C. T. 1906 A, 724, 753 (Batoidei).
Zittel and Koken 1911 A, 65 (Rhinorajidæ).
Zittel and Schlosser 1923 A, 71 (Rhinorajidæ).

RAJIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 99.
Hay, O. P. 1902 A, 315.
Abel, O. 1908 E, 409 ("rochen").
Anthony, R. 1912 A ("raies").
Arldt, T. 1907 D, 283.
1923 A, 489.
Backman, G. 1913 A, 8 ("rajiden").
1915 A (Raiidæ).
Bonaparte, C. L. 1839 A, 3, 6.
Braus, H. 1904 A, 405 ("rajiden").
Bridge, T. W. 1904 A, 461 (Raiidæ).
Bronn, H. G. 1849 A, 830, seq.
Carus, V. 1875 A, 604.
Cope, E. D. 1891 N, 17.
Cunningham, J. T. 1912 A, 246 (Raiidæ).
Cuvier, G. 1801 A, 26 ("raies").
1815 A, 123 ("raies").
Day, E. C. H. 1865 A, 565 (Raiidæ).
Dollo, L. 1889 F, 340.
1904 C, 50.
1910 A, 396 ("raies").
1922 A, 218 ("raies").
Fitzinger, L. J. 1873 A, 57 (Rajæ).
Fürbringer, K. 1903 A, 369 ("rajiden").
Garman, S. 1913 A, 316.
Gaupp, E. 1905 D, 842 (Rajæ).
Gill, T. 1908 B, 160 (Raiidæ).
Goodrich, E. S. 1909 A, 160.
Hay, O. P. 1901 A, 545.
Hoernes, R. 1886 A, 545.
Huber, O. 1901 A, 636.
Imms, A. D. 1905 A, 46.
Jaekel, O. 1909 D, 717.
Jordan, D. S. 1905 A, i, 551; ii, 588.
1907 B, 208, 759.
1923 A, 103.
Jordan and Gilbert 1882 A, 39 (Raiidæ).
Kerr, J. S. 1900 A, 229 ("rays").
Kingsley, J. S. 1885 A, 87.
Klaatsch, H. 1893 C, 181.
Leigh-Sharpe, W. H. 1926 A, 341 (Raiidæ).
Leriche, M. 1906 C, 273.
Leunis and Ludwig 1883 A, 790.
Lubosch, W. 1909 A, 4 ("rochen").
Mayer, P. 1886 A, 273.
Müller, E. 1909 A, 512 ("rochen").
Owen, R. 1845 B, 43 (Raiidæ).
Pompeckj, J. F. 1913 A, 1130.
Rabinerson, A. 1925 A, 442, 445, 518 ("rochen").
Radcliffe, L. 1916 A, 271.
Rauther, M. 1913 A, 1099.
Regan, C. T. 1906 A, 724, 755 (Raiidæ).
Ridewood, W. G. 1921 A, 386 (Raiidæ).
Roth, W. 1911 A, 546, 547.
Sabatier, A. 1903 B, 1218 ("rajides").
1904 A, 252 ("raies").
Schauinsland, H. 1906 A, 407.
Terra, P. 1911 A, 203.
Wallace, A. R. 1876 A, ii, 462 (Raiidæ).
Zittel and Koken 1911 A, 66 (Rajinæ).
Zittel and Schlosser 1923 A, 72 (Rajinæ).
Zittel and Woodward 1902 A, 41.

RAJA Linn. Type *R. batis* Linn.

Hay, O. P. 1902 A, 315.
Abel, O. 1906 C, 82.
1908 E, 409.
Agassiz, L. 1874 A, 131.
Allis, E. P. 1915 A, 577 (Raia).
Arldt, T. 1923 A, 489.
Backman, G. 1913 A.
Beer, G. R. 1926 A, 273, fig. 7.
Braus, H. 1901 B, 176, text-fig. 8.
Bridge, T. W. 1904 A, 461, 753 (Raia).
Briquel, P. 1898 A, 16.
Bronn, H. G. 1848 B, 1076.
1849 A, 639.
Carter, O. 1875 A, 67, pl. iv, fig. 4.
Coulon, L. 1903 A, 132 (Raia).
Daniel, J. F. 1922 A, figs. 18, 66, 71.
Dohrn, A. 1884 A, 139.
Dollo, L. 1910 A, 394.
Duméril, A. 1856 A, 137 ("raie").
Eastman, C. R. 1904 H, 71.
Fahrenholz, C. 1915 A, 407.
Fuchs, T. 1900 A, 6, pl., figs. 1, 2.
1907 C, 26.
Garman, S. 1913 A, 317 (Raia).
Gaupp, E. 1898 B, 860.
1905 D, 897.
Gegenbaur, C. 1870 B, 449, pl. xv, fig. 11.
1870 C, 406.
Giebel, C. G. 1855 A, 117.
Goette, A. 1878 A, 12.
Goodrich, E. S. 1906 A, 345.
1909 A, 515, figs.
Gregory, W. K. 1904 A, 62 (Raia).
Haller, G. 1923 A, 96, fig. 1.
Hamburger, R. 1904 A, 73.
Hay, O. P. 1901 B, 68.
Hoeven, J. 1822 A.
Hoffmann, L. 1912 A, 241, pls. xvii, xxi.
Huxley, T. H. 1853 A ("skate").
1876 E, 115 (Raia).
Imms, A. D. 1905 A, 46.
Jacobshagen, E. 1920 A, 92.
1923 A, 175.
Jaekel, O. 1901 A, 552.
1909 D, 718, fig. 9.
Jordan, D. S. 1905 A, i, 552; ii, 588.
1907 B, 209.
1917 A, 11.
1923 A, 103.
Jordan and Evermann 1917 A, 11.
Jordan and Gilbert 1882 A, 39 (Raia).
Kehrer, F. A. 1896 A, 349.
Kingsley, J. S. 1925 A, 235 (Raia).
Köstlin, O. 1844 A.
Kner, R. 1860 B, 817.
Leigh-Sharpe, W. H. 1921 A, 359.
1924 A, 567, figs. 1-15 (Raia).
1926 A, 352, figs. 5-8 (Raia).
Leriche, M. 1906 C, 420.
Leydig, F. 1852 A.
Lubosch, W. 1909 A, 3, fig. 4.
Lütken, C. L. 1874 A, 318.
Mayer, P. 1886 A, 231.
Meckel, J. F. 1825 A.
Meek, A. 1916 A, 42, 411 (Raia).
Meyer, G. H. 1847 A, 87.
Müller, E. 1909 A, 512.
Norman, E. W. 1926 A, 449, fig. 55.
Osburn, R. C. 1907 B, 179.
Owen, R. 1845 B, 44 (Raia).
1848 B, 196 (Raia).
1868 A, 904 (Raia).
Pouchet, G. 1878 A, 148, pl. iv.
Priem, F. 1908 B, 76, figs. 31-33.
Rabinerson, A. 1925 A, 435, 445, figs. 1, 4; 517, fig. 2.
Radcliffe, L. 1916 A, 271, pl. xlv.
Ridewood, W. G. 1896 A, 382, 386, figs. 7, 8 (Raia).
1921 A, 387, figs. 32-34 (Raia).
Rennie, J. 1906 A, 428 (Raia).
Reynolds, S. H. 1897 A, 32, 114 (Raia).
Roth, W. 1911 A, 546, pl. vi (Raia).
Ryder, J. 1887 A, 357 (Raia).
Sabatier, A. 1903 B, 1218 ("raie").
Sečerov, S. 1911 A, 8.
Sonies, F. 1907 A, 445.
Stannius, H. 1854 A.
Steinhard, O. 1903 A, 37.
Stephan, P. 1900 A, 311, 345, fig. 2.
Struck, W. 1915 A, 139, fig. 6.
Tomes, C. S. 1898 B, 444 (Raia).
Ussow, S. 1900 A, 233.
Williamson, C. W. 1851 A, 672, pl. xxx, fig. 28-32 (Raia).

Raja? dux Cope.

Hay, O. P. 1902 A, 316.
Eastman, C. R. 1904 H, 72, pl. xxviii, fig. 2 (This genus?).
Shattuck, G. B. 1904 A, cxvi (This genus?).
Upper Miocene (Calvert); Maryland.

GRYPHODOBATIS Leidy. Type *G. uncus* Leidy.

Hay, O. P. 1902 A, 316.
Jordan, D. S. 1923 A, 104.

Gryphodobatis uncus Leidy.

Hay, O. P. 1902 A, 316.
Phosphate beds; South Carolina.

ONCOBATIS Leidy. Type *O. pentagonus* Leidy.

Hay, O. P. 1902 A, 316.
Hay, O. P. 1901 B, 68.
Jordan, D. S. 1923 A, 103.
Zittel and Woodward 1902 A, 42.

Oncobatis pentagonus Leidy.

Hay, O. P. 1902 A, 316.
Hay, O. P. 1927 D, 265, 268.
Pliocene or Pleistocene (Idaho); Idaho.

PRISTIDÆ Owen.

Owen, R. 1846 E, 51.
Hay, O. P. 1902 A, 316.
Abel, O. 1919 A, 124.
Aichel, O. 1919 A, 145.
Arldt, T. 1907 D, 283.
1923 A, 489.
Boulenger, G. A. 1917 B, 329.
Braus, H. 1906 A, 182 ("pristiden").
Bridge, T. W. 1904 A, 459.
Cope, E. D. 1869 L, 312.
1891 N, 17.
Cunningham, J. T. 1912 A, 246.
Dollo, L. 1889 F, 340.
1904 C, 48.
1922 A, 218.
Engel, H. 1909 A, 51 ("pristiden").
Fitzinger, L. J. 1873 A, 57 (Pristes).
Fowler, H. W. 1911 A, 80.
Garman, S. 1913 A, 258, 260.
Gill, T. 1905 A, 657.
Goodrich, E. S. 1909 A, 160.
Günther, A. C. 1870 A, 436.
Hay, O. P. 1901 B, 68.
Hoffmann, L. 1912 A, 239 ("pristiden").
Huber, O. 1901 A, 627.
Jacobshagen, E. 1923 A, 175 ("pristiden").
Jordan, D. S. 1905 A, i, 549 (Pristididæ).
1907 B, 206, 759 (Pristididæ).
Jordan and Gilbert 1882 A, 36.
Radcliffe, L. 1916 A, 268.
Rauther, M. 1913 A, 1098.
Regan, C. T. 1906 A, 724 (Rhinobatidæ).
Pompeckj, J. F. 1913 A, 1127, 1129.
Ridewood, W. G. 1921 A, 380 (Pristinæ).
Roth, W. 1911 A, 544-545.
Schlosser, M. 1917 A, 139, 141 ("pristiden").
Stromer, E. 1905 B, 46, 55.
1912 A, 20.
1917 A, 23.
1917 B, 1*.
1925 A, 12, 18, 21.
Wallace, A. R. 1876 A, ii, 462.
Woodward, A. S. 1892 I, 533.
Zittel and Koken 1911 A, 64.
Zittel and Schlosser 1923 A, 70.
Zittel and Woodward 1902 A, 40.

PRISTIS Linck. Type *Squalus pristis* Linn.

Linck, H. F. 1790, Mag. neuest. Phys. Naturg., 31.
Hay, O. P. 1902 A, 316.
Abel, O. 1912 F, 514.
1919 A, 124, fig. 84.
1921 A, 156.
Agassiz, L. 1844 D, 142.
Aichel, O. 1919 A, 145.
Allis, E. P. 1913 A, 327.
Arldt, T. 1923 A, 489.
Backman, G. 1913 A, 45.
Bridge, T. W. 1904 A, 459, 752.
Bronn, H. G. 1849 A, 640.
Coulon, L. 1903 A, 130.
Daniel, J. F. 1922 A, 32, figs. 17, 36, 38, 41.
Dollo, L. 1889 F, 336.
1904 C, 48.
1910 A, 394.
1922 A, 218.
Duméril, A. 1856 A, 139 ("scie").
Engel, H. 1909 A, 53.
Fowler, H. W. 1911 A, 81.
Fraas, E. 1907 A, 1.
Fürbringer, M. 1902 A, 172.
Garman, S. 1913 A, 260.
Gaupp, E. 1898 B, 860.
Gegenbaur, C. 1870 B, 458, pl. xvi, fig. 28.
Gervais, P. 1852 A, explan. pl. lxviii.
1859 A, 519, pl. lxviii.
Giebel, C. G. 1855 A, 117.
Green, J. 1857 A, 67.
Hay, O. P. 1901 B, 68.
Heilprin, A. 1887 A, 300.
Hoffman, L. 1912 A, 240, 334, pls. xiii-xvi, xviii, xix.
Huber, O. 1901 A, 627.
Jacobshagen, E. 1923 A, 176.
Jaekel, O. 1902 E, 1078.
1925 C, 182.
Jordan, D. S. 1905 A, 199, 548.
1907 B, 207.
1917 A, 41, 49, 52.
Jordan, D. S. 1923 A, 102.
Jordan and Evermann 1917 A, 41, 49, 52.
Jordan and Gilbert 1882 A, 37.
Kemna, A. 1902 A, 233.
Klaatsch, H. 1890 A, 120, 123.
Köllicker, A. 1860 C, 144.
Köstlin, O. 1844 A.
Leriche, M. 1905 A, 97.
1906 C, 420.
1907 B, 337.
Mayer, P. 1886 A, 250.
Mivart, St. G. 1878 B, 311, 332.
Müller and Henle 1838 A, 89.
Owen, R. 1868 A, 902.
Pappenheim, P. 1905 A, 98.
1905 B, 397, figs. 1, 2, 6.
Priem, F. 1908 B, 92, 105, fig. 52.
Probst, J. 1886 B, 304.
Rabl, C. 1901 A, 527.
Radcliffe, L. 1916 A, 268, figs. 21, 22.
Reynolds, S. H. 1897 A, 109, 119.
Ridewood, W. G. 1896 A, 381, 384.
1921 A, 385, fig. 31.
Roth, W. 1911 A, 544, pls. vi, viii.
Schoenichen, W. 1900 A, 504.
Spengel, J. W. 1892 A, 147.
Stannius, H. 1854 A.
Steinhard, O. 1903 A, 35.
Stephan, P. 1900 A, 409.
Stromer, E. 1905 B, 46.
1917 A, 8.
1925 A, 18, 20.
Vigliarolo, G. 1891 A, 3.
Wagner, R. 1843 A ("sägefische").
Williamson, W. C. 1851 A, 677 ("sawfish").
Woodward, A. S. 1889 I, 3.
1892 I, 533.
1918 A, 194.
1921 B, 38.
Zittel and Schlosser 1923 A, 70.
Zittel and Woodward 1902 A, 40.

Pristis agassizi Gibbes.

Hay, O. P. 1902 A, 316.
Vigliarolo, G. 1891 A, 10, 26.
Eocene; South Carolina.

Pristis amblodon Cope.

Hay, O. P. 1902 A, 316.
Fowler, H. W. 1911 A, 81; fig. 39.
Hussakof, L. 1908 A, 34, fig. 11.
Vigliarolo, G. 1891 A, 12, 26.
Eocene; New Jersey.

Pristis attenuatus Cope.

Hay, O. P. 1902 A, 316.
Hussakof, L. 1908 A, 34, fig. 12.
Vigliarolo, G. 1891 A, 13, 26.
Tertiary; North Carolina.

Pristis brachyodon Cope.

Cope, E. D. 1869 L, 312.
Hay, O. P. 1902 A, 316.
Vigliarolo, G. 1891 A, 12, 26.
Eocene (Greensand); Virginia.

Pristis curvidens Leidy.

Hay, O. P. 1902 A, 316.
Fowler, H. W. 1911 A, 82; fig. 40.
Vigliarolo, G. 1891 A, 11, 26.
Upper Cretaceous (Manasquan?); New Jersey.

Pristis ensidens Leidy.

Hay, O. P. 1902 A, 316.
Vigliarolo, G. 1891 A, 12, 27
Miocene? (Phosphate beds); South Carolina.

Pristis sp. indet.

Emmons, E. 1858 B, 243, fig. 93.
Eocene; North Carolina.
Tuomey, M. 1848 A, 160.
Eocene; South Carolina.

Superfamily DASYATOIDÆ, new form.

Hay, O. P. 1902 A, 317 (Masticura).
Fowler, H. W. 1911 A, 84.
Garman, S. 1913 A, 259 (Dasybatoidei, Myloidea, Mobuloidea).
Goodrich, E. S. 1909 A, 163 (Centrobatoidei).
Gregory, W. K. 1907 D, 446 (Masticura).
Jaekel, O. 1911 A, 58 (Centrobati).
Jordan, D. S. 1905 A, i, 549 (Batoidei).
1907 B, 212 (Batoidei).
1923 A, 104 (Masticura).
Pompeckj, J. F. 1913 A, 1130 (Centrobati).
Ziegler, H. E. 1908 B, 656, pl. xxiii, fig. 1 (Torpedo).
Zittel and Koken 1911 A, 66 (Masticura).
Zittel and Schlosser 1923 A, 72 (Masticura).

PTYCHODONTIDÆ.

Hay, O. P. 1902 A, 317.
Abel, O. 1919 A, 139.
Goodrich, E. S. 1909 A, 165.
Hay, O. P. 1901 B, 68.
Hussakof, L. 1908 A, 41.
Jordan, D. S. 1923 A, 105.
Pompeckj, J. F. 1913 A, 1131.
Schlosser, M. 1917 A, 139, 141 ("ptychodontiden").
Zittel and Koken 1911 A, 68 (Ptychodontinæ).
Zittel and Schlosser 1923 A, 74 (Ptychodontinæ).

PTYCHODUS Agassiz. Type *P. mammillaris* Agassiz.

Hay, O. P. 1902 A, 317.
Abel, O. 1919 A, 139, fig. 103.
Arldt, T. 1907 D, 339.
Bronn, H. G. 1848 B, 1058.
1849 A, 648, 649.
Canavari, M. 1916 A, 35, pls. v-xiv.
Canestrelli, G. 1910 A, 102.
Coulon, L. 1903 A, 118.
Darton, N. H. 1908 A, 457.
Deecke, W. 1913 A, 86.
Dibley, G. E. 1911 A, 263.
Fossa-Mancini, E. 1921 A, 195.
Gaudry, A. 1896 A, 172, fig. 157.
Giebel, C. G. 1855 A, 115, pl. xlviii.
Goodrich, E. S. 1909 A, 165, fig. 128.
Gosselet, J. A. A. 1875 A, 12, 121.
Hay, O. P. 1901 B, 68.
Heilprin, A. 1887 A, 300.
Humphreys, J. 1908 A, 11.
Jordan, D. S. 1905 A, i, 557.
1907 B, 214.
1919 B, 194.
1923 A, 105.
Leriche, M. 1902 B, 89.
1906 C, 73.
Mantell, G. A. 1844 A, 607, 616, fig. 127.
Oswald, F. 1851 A, 531.
Pompeckj, J. F. 1913 A, 1131.
Priem, F. 1896 B, 10.
1908 B, 46, 49.
Raffelt, R. 1877 A, 279.
Regan, C. T. 1906 A, 756.
Sauvage, E. 1867 A, 107.
Schlosser, M. 1917 A, 142.
Steinmann, G. 1907 A, 404.
Stephan, P. 1900 A, 409.
Storms, R. 1891 A, 115, 147.
Woodward, A. S. 1890 H, 38.
1898 B, 52.
1904 A, 133.
1904 B, 139.
1904 C, 190.
1912 A, 225, text-fig. 69.
1921 A, 180.
1921 B, 37.
1921 C, 180.
1922 C, 75.
Zittel and Koken 1911 A, 68.
Zittel and Schlosser 1923 A, 74, figs. 127, 128.
Zittel and Woodward 1902 A, 43.

Ptychodus anonymus Williston.

Hay, O. P. 1902 A, 317.
Cretaceous (Niobrara, Benton?); Kansas.

Ptychodus decurrens Agassiz.

Hay, O. P. 1902 A, 317.
Canestrelli, G. 1910 A, 102, 117.
Coulon, L. 1903 A, 119.
Dibley, G. E. 1911 A, 264, pl. xvii, fig. 2, pl. xix, figs. 20-24.
Fossa-Mancini, E. 1921 A, 195.
Gaudry, A. 1896 A, 172, fig. 157.
Gervais, P. 1852 A, explan. pl. lxxviii.
1859 A, 526, pl. lxxviii.
Leriche, M. 1902 B, 90, 94, pl. ii, figs. 19, 20.
1906 B, 348.
1906 C, 414.
Mantell, G. A. 1844 A, 617.
Oswald, F. 1851 A, 535.
Pompeckj, J. F. 1913 A, 1132, fig. 36.
Priem, F. 1896 B, 11.
1912 B, 265.
1913 A, 159.
Stefano, G. 1912 B, 60, pl. ii.
Woodward, A. S. 1904 A, 133, pl. xv, text-fig. 1.
1904 B, 140.
1912 A, 239, pls. li, lii; text-figs. 70, 71, 76, 77.
1922 C, 75, fig. 76.
Zittel and Koken 1911 A, 68, fig. 122.
Zittel and Woodward 1902 A, 43, fig. 86.
Cretaceous; Europe: Cretaceous; Arizona.

Ptychodus janevaii Cope.

Hay, O. P. 1902 A, 317.
Cretaceous (Niobrara); Kansas.

Ptychodus mammillaris Agassiz.

Hay, O. P. 1902 A, 318.
Canestrelli, G. 1910 A, 103.
Coulon, L. 1903 A, 118.
Dibley, G. E. 1911 A, 271, pl. xxii, figs. 3-5.
Leriche, M. 1902 B, 93, pl. ii, figs. 8-12.
1906 B, 348.
1906 C, 418.
Oswald, F. 1851 A, 535.
Priem, F. 1896 B, 11.
1908 B, pl. i, figs. 4-7.
Stefano, G. 1912 B, 61, pl. ii.
Woodward, A. S. 1890 H, 39, pl. i, figs. 3-14.
1912 A, 230, pl. xlvii, figs. 13-27, text-fig. 72.
Cretaceous; Europe: Cretaceous; Delaware.

Ptychodus martini Williston.

Hay, O. P. 1902 A, 318.
Mantell, G. A. 1844 A, 615, fig. 128.
Upper Cretaceous (Niobrara); Kansas.

Ptychodus occidentalis Leidy.

Hay, O. P. 1902 A, 318.
Upper Cretaceous (Niobrara); Kansas.

Ptychodus papillosus Cope.

Hay, O. P. 1902 A, 318.
Upper Cretaceous; Colorado.

Ptychodus parvulus Whiteaves.

Hay, O. P. 1902 A, 318.
Lambe, L. M. 1904 C, 21, 36, 41.
Upper Cretaceous (Colorado); Manitoba.

Ptychodus polygyrus Agassiz.

Hay, O. P. 1902 A, 318.
Canavari, M. 1916 A.
Canestrelli, G. 1910 A, 103, 114.
Coulon, L. 1903 A, 119.
Dibley, G. E. 1911 A, 268, pl. xx, figs. 1, 2; pl. xxi, figs. 1, 2.
Fossa-Mancini, E. 1921 A, 195.
Leriche, M. 1902 B, 97, pl. ii, figs. 21-23.
1906 B, 348.
1906 C, 420, pl. vi.
Mantell, G. A. 1844 A, 616, pl. vi, text-fig. 130 (P. polygurus).
Oswald, F. 1851 A, 535.
Priem, F. 1896 B, 11.
Stefano, G. 1912 B, 59, pl. ii.
Woodward, A. S. 1912 A, 232, pl. xlviii, figs. 12-16; pl. xlix.
1890 H, 40, pl. i, figs. 15-20.
Worthen, A. H. 1890 A, 4, fig. 6.
Zittel and Woodward 1902 A, 43, fig. 85.
Upper Cretaceous; Europe: Upper Cretaceous, Alabama, Kansas, Illinois (in glacial drift).

Ptychodus whipplei Marcou.

Hay, O. P. 1902 A, 318.
Cockerell, T. D. A. 1908 C, 162.
Freudenberg, W. 1921 A, 111 (P. whiplei).
Upper Cretaceous (Niobrara); Kansas, Colorado, New Mexico, Mexico.

Ptychodus sp. indet.

Hay, O. P. 1902 A, 318.
Cannon, G. L. 1890 B, 313.
Upper Cretaceous (Niobrara); Colorado.
Gilmore, C. W. 1921 E, 590.
Lower Cretaceous (Arundel); Maryland (This genus?).
Lee, W. T. 1917 A, 197.
Upper Cretaceous (Mancos); New Mexico.
McConnell, R. G. 1893 A, 48 D.
Cretaceous (Peace River); Athabasca.
Reeside, J. B. 1924 A, 11, pl. iii.
Upper Cretaceous (Mancos); Colorado.
Tuomey, M. 1848 A, 165, 166, 208 ("Ptychodus").
Tertiary; South Carolina.

PLATYCHODUS Yates. Type *Ptychodus mortoni* Mantell.

Yates, L. G. 1886 A, 20.
Hay, O. P. 1902 A, 317 (Hemiptychodus).
Fossa-Mancini, E. 1921 A, 195 (Hemiptychodus).
Jordan, D. S. 1923 A, 105 (Hemiptychodus).
Pompeckj, J. F. 1913 A, 1131 (Hemiptychodus).
Woodward, A. S. 1889 D, 149.

Platychodus mortoni (Mantell).

Hay, O. P. 1902 A, 317 (Hemiptychodus).
Dibley, G. E. 1911 A, 272, pl. xxii, figs. 7, 8 (Ptychodus).
Freudenberg, W. 1921 A, 111 (Ptychodus).
Hay, O. P. 1901 B, 68 (Hemiptychodus).
Hussakof and Bryant 1919 A, 155 (Hemiptychodus).
Leriche, M. 1902 B, 90 (Ptychodus).
Merrill, G. P. 1907 A, 17 (Ptychodus).
Smith, E. A. 1894 A, 280 (Ptychodus).
Spillman, W. 1863 A (Ptychodus).
Tuomey, M. 1850 B, 120 (Ptychodus).
Woodward, A. S. 1912 A, 244, pl. liv, fig. 1 (Ptychodus).
Yates, L. G. 1886 A, 20.

Upper Cretaceous; Alabama, Mississippi, Kansas, Mexico.

DASYATIDÆ.

Unless otherwise indicated the writers, as cited, employ for this family the name Trygonidæ.

Hay, O. P. 1902 A, 318 (Dasyatidæ).
Abel, O. 1912 F, 565.
1919 A, 126.
Arldt, T. 1907 D, 687.
1923 A, 489 ("trigoniden").
Bridge, T. W. 1904 A, 464.
Carus, V. 1875 A, 604.
Cope, E. D. 1891 N, 17.
Cunningham, J. T. 1912 A, 246.
Dollo, L. 1889 F, 341.
1904 C, 48.
Fitzinger, L. J. 1873 A, 57 (Trygones).
Fürbringer, K. 1903 A, 369 ("trygoniden").
Garman, S. 1913 A, 259, 373 (Dasybatidæ).
Gill, T. 1905 A, 658 (Dasybatidæ).
1908 B, 160 (Dasybatidæ).
Goodrich, E. S. 1909 A, 164.
Gregory, W. K. 1907 D, 446 (Dasyatidæ).
Hay, O. P. 1901 B, 68 (Dasyatidæ).
Hoernes, R. 1886 A, 545.
Huber, O. 1901 A, 629.
Imms, A. D. 1905 A, 46.
Jordan, D. S. 1905 A, i, 555 (Dasyatidæ).
1907 B, 212, 759 (Dasyatidæ).
1923 A, 104 (Dasyatidæ).
Jordan and Gilbert 1882 A, 45.
Jordan and Hannibal 1923 A, 59 (Urolophidæ).
Kingsley, J. S. 1885 A, 88.
Leigh-Sharpe, W. H. 1926 A, 341.
Leriche, M. 1906 C, 273.
1907 B, 339.
Leunis and Ludwig 1883 A, 791.
Lönnberg, E. 1910 A, 11.
Pompeckj, J. F. 1913 A, 1131.
Porta, A. 1905 A, 234.
Radcliffe, L. 1916 A, 273 (Dasybatidæ).
Rauther, M. 1913 A, 1099.
Regan, C. T. 1906 A, 724, 756 (Dasybatidæ).
Roth, W. 1911 A, 547.
Schlosser, M. 1917 A, 145 (Trigoninæ).
Stannius, H. 1854 A (Trygones).
Terra, P. 1911 A, 203.
Wallace, A. R. 1876 A, ii, 463.
Woodward, A. S. 1904 B, 140.
Zittel and Koken 1911 A, 66.
Zittel and Schlosser 1923 A, 72 (Trygoninæ).
Zittel and Woodward 1902 A, 42.

DASYATIS Rafinesque. Type *D. ujo* = *Raja pastinica* Linn.

Unless otherwise indicated the writers, as cited, use for this genus the name *Trygon*.

Hay, O. P. 1902 A, 319 (Dasyatis).
Abel, O. 1919 A, 131, fig. 93.
Agassiz, L. 1874 A, 134.
Allis, E. P. 1923 B, 124.
Arldt, T. 1923 A, 489 (Dasyatis, Trygon).
Baudelot, E. 1873 A, 95.
Bridge, T. W. 1904 A, 464.
Cockerell, T. D. A. 1906 A, 160 (Dasyatis).
Dollo, L. 1910 A, 394.
Duméril, A. 1856 A, 137 ("pastenague").
Evans, H. M. 1916 A, 431, figs. 1-7.
1923 A, 4, 28, pl. i, text-figs. 1-3.
Fahrenholz, C. 1915 A, 407.
Fürbringer, K. 1903 A, 368.
Fürbringer, M. 1903 A, 625.
Garman, S. 1913 A, 7, 373, 375 (Dasyatus).
Gaupp, E. 1898 B, 860.
1905 D, 870.
Gegenbaur, C. 1870 C, 422.
Goodrich, E. S. 1906 A, 350.
Hamburger, R. 1904 A, 73 (Dasyatis).
Haseman, J. D. 1912 A, 98 (Dasyatis).
Hay, O. P. 1901 B, 68 (Dasyatus).
Heilprin, A. 1887 A, 294, 300.
Huber, O. 1901 A, 629, pl. xxvii.
Jordan, D. S. 1905 A, i, 556; ii, 566 (Dasyatis).
1907 B, 213 (Dasyatis).
Jordan, D. S. 1917 A, 78.
1923 A, 104 (Dasyatis).
Jordan and Evermann 1917 A, 78 (Dasyatis).
Jordan and Gilbert 1882 A, 47, 65, 879.
Klaatsch, H. 1901 A, 435.
Leigh-Sharpe, W. H. 1926 A, 341.
Leriche, M. 1905 A, 100.
1906 C, 423.
Leunis and Ludwig 1883 A, 791.
Leydig, F. 1852 A (Dasyatis).
Müller and Henle 1838 A, 90.
Norman, E. W. 1926 A, 452.
Owen, R. 1845 B, 44.
Pompeckj, J. F. 1913 A, 1131.
Porta, A. 1905 A, 234.
Rabinerson, A. 1925 A, 448, 453, fig. 4; 518, fig. 1.
Radcliffe, L. 1916 A, 273, pl. xlvi (Dasybatus).
Reynolds, S. H. 1897 A, 106, 114.
Roth, W. 1911 A, 547, pls. vi, viii.
Schlosser, M. 1917 A, 144 (Xiphotrygon).
Sewertzoff, A. N. 1923 A, 391.
Stannius, H. 1854 A.
Steinhard, O. 1903 A, 39.
Solger, B. 1880 B, 476, pl. xxxix.
Zittel and Koken 1911 A, 66.
Zittel and Schlosser 1923 A, 72 (Xiphotrygon).
Zittel and Woodward 1902 A, 42.

Dasyatis carolinensis (Emmons).

Hay, O. P. 1902 A, 319.
Miocene; North Carolina, Virginia.

Dasyatis hastata? (De Kay).

Hay, O. P. 1902 A, 319.
Hay, O. P. 1923 A, 363.
Hussakof, L. 1908 A, 30 (This species?).
Leidy, J. 1860 B, 119, pl. xxvii, figs. 1, 2 (Pastinica).
Radcliffe, L. 1916 A, 273 (Dasybatus).
Pleistocene; South Carolina.

Dasyatis sp. indet.

Hay, O. P. 1902 A, 319.
Clark and Miller 1912 A, 167, 168 (Dosyatus).
Hay, O. P. 1923 A, 370.
Miocene (Calvert); Virginia: Pleistocene; Georgia.

HELIOBATIS Marsh. Type *H. radians* Marsh.

Marsh, O. C. 1877 D, 261.
Hay, O. P. 1902 A, 319 (Dasyatis in part).
Cope, E. D. 1879 O (Xiphotrygon).
1884 O, 49 (Xiphotrygon).
Jordan, D. S. 1923 A, 104 (Heliobatis, Xiphotrygon).
Regan, C. T. 1906 A, 756 (Xiphotrygon).
Seeley, H. G. 1886 A, 412 (Xiphotrygon).
Woodward, A. S. 1889 D, 153 (Xiphotrygon).
Zittel, K. A. 1890 A, 105 (Xiphotrygon).
Zittel and Woodward 1902 A, 42 (Xiphotrygon).

Heliobatis radians Marsh.

Marsh, O. C. 1877 D, 256.
Hay, O. P. 1902 A, 319 (Dasyatis).
Cockerell, T. D. A. 1908 C, 162 (Dasyatis).
Jordan, D. S. 1905 A, i, 557 (Xiphotrygon acutidens).
1907 B, 214 (X. acutidens).
Lower Eocene (Green River); Wyoming.

UROBATIS Garman. Type *Leiobatis sloani* Blainv.

Garman, S. 1913 A, 373, 401.
Abel, O. 1906 C, 82 (Urolophus).
Arldt, T. 1923 A, 489 (Urolophus).
Duméril, A. 1856 A, 144 (Urolophus).
Haswell, W. A. 1884 A, 103 (Urolophus).
Jordan, D. S. 1923 A, 104.
Jordan and Evermann 1896 A, 79 (Urolophus).
Jordan and Gilbert 1882 A, 46 (Urolophus).
Leriche, M. 1906 C, 423 (Urolophus).
Müller and Henle 1838 A, 90 (Urolophus).
1841 A, 173 (Urolophus).
Parker and Haswell 1897 A, 160, fig. 788 (Urolophus).

Urobatis halleri (Cooper).

Cooper, J. G. 1863, Proc. Calif. Acad. Sci. iii, 96 (Urolophus).
Arnold, R. 1903 A, 47, 346 (Urolophus. This species?).
Daniel, J. F. 1922 A, 10, 32, figs. 10-20, 36, 42 (Urolophus).
Garman, S. 1913 A, 403 (Urobatis).
Hay, O. P. 1927 D, 171.
Jordan, D. S. 1907 A, 120 (Urolophus. This species?).
Jordan and Evermann 1896 A, 80 (Urolophus).
Jordan and Gilbert 1919 A, 62 (Urobatis).
Jordan and Hannibal 1923 A, 59.
Recent; Coast of California to northern Mexico: Pleistocene; California.

MYLIOBATIDÆ Owen.

Owen, R. 1846 E, 51. (See Richardson).
Hay, O. P. 1902 A, 319.
Abel, O. 1906 C, 84.
1912 F, 565.
1919 A, 128.
Agassiz, L. 1874 A, 133.
Arldt, T. 1907 D, 666.
1923 A, 489 ("myliobatiden").
Bridge, T. W. 1904 A, 465, 747.
Carus, V. 1875 A, 604.
Cope, E. D. 1891 N, 17.
Cunningham, J. T. 1912 A, 246.
Dollo, L. 1889 F, 341.
1904 C, 48.
Duméril, A. 1856 A, 145 ("myliobatides").
Fitzinger, L. J. 1873 A, 57 (Myliobatæ).
Fowler, H. W. 1911 A, 84.
Garman, S. 1908 A, 251.
1913 A, i, 259, 427 (Mylibatidæ); 259 (Myloidei, in part).
Goodrich, E. S. 1909 A, 165.
Gill, T. 1865 B, 135 (Myliobatides, Myliobatinæ, Aëtobatinæ).
Gregory, W. K. 1907 D, 446.
Hay, O. P. 1901 B, 68.
Hoernes, R. 1886 A, 545.
Huber, O. 1901 A, 634.
Imms, A. D. 1905 A, 46.
Jaekel, O. 1902 B, 134 ("myliobatiden").
1903 G, 389 ("myliobatiden").
Jordan, D. S. 1905 A, i, 557.
1907 B, 214.
1923 A, 105.
Jordan and Gilbert 1882 A, 49.
Kingsley, J. S. 1885 A, 89.
Leriche, M. 1907 B, 339.
Leunis and Ludwig 1883 A, 792.
Lönnberg, E. 1910 A, 11.
Pompeckj, J. F. 1913 A, 1131.
Porta, A. 1905 A, 234.
Radcliffe, L. 1916 A, 277.
Rauther, M. 1913 A, 1099.
Richardson, J. 1846 A, 198.
Roth, W. 1911 A, 547-548.
Schlosser, M. 1917 A, 145 (Myliobatinæ).
Stromer, E. 1904 A, 249 ("myliobatiden").
1904 B, 203 ("myliobatiden").

Stromer, E. 1905 B, 38 (Myliobatidæ); 38, 43 (Myliobatinæ).
1912 A, 20.
Terra, P. 1911 A, 203.
Wallace, A. R. 1876 A, ii, 463.
Woodward, A. S. 1898 B, 53.
1904 B, 140.
Zittel and Koken 1911 A, 67 (Myliobatinæ).
Zittel and Schlosser 1923 A, 73 (Myliobatinæ).
Zittel and Woodward 1902 A, 43.

MYLIOBATIS Duméril. Type *Raja aquila* Linn.

Hay, O. P. 1902 A, 319.
Abel, O. 1912 F, 435, fig. 320.
1919 A, 131, figs. 93, 95, 96.
Agassiz, L. 1874 A, 133.
Allis, E. P. 1923 B, 124.
Arldt, T. 1923 A, 489.
Bassani, F. 1905 A, 15.
Berry, E. W. 1916 A, 360.
Botti, U. 1877 A, 371 (Myliobates).
Bridge, T. W. 1904 A, 465.
Briquel, P. 1898 A, 16.
Bronn, H. G. 1848 A, 763 (Myliobates).
1849 A, 638.
Coulon, L. 1903 A, 131.
Daniel, J. F. 1922 A, figs. 9, 122, 125.
Deecke, W. 1913 A, 83 (Myliobates).
Dewey, M. 1918 A, 143, fig. 3.
Duméril, A. 1856 A, 138 (Myliobates).
Eastman, C. R. 1901 B, 98.
1904 H, 73.
Fowler, H. W. 1911 A, 84.
Fürbringer, K. 1903 A, 369.
Fürbringer, M. 1903 A, 625.
Garman, S. 1908 A, 252.
1913 A, 428.
Gaupp, E. 1905 D, 870.
Gegenbaur, C. 1870 C, 406.
Gervais, P. 1852 A, explan. pls. lxvii, lxxix (Myliobates).
1859 A, 518, pls. lxvii, lxxix (Myliobates).
Giebel, C. G. 1855 A, 117, pl. xlviii (Myliobates).
Goodrich, E. S. 1909 A, 166, fig. 130.
Harless, E. 1850 A, 843, pls. xxiii-xxv (Myliobates).
Haswell, W. A. 1884 A, 78.
Heilprin, A. 1887 A, 297, 300.
Huber, O. 1901 A, 634.
Humphreys, J. 1908 A, 12 (Myliobates).
Jacobshagen, E. 1923 A, 176.
Jaekel, O. 1911 A, 58, fig. 57.
Jordan, D. S. 1905 A, i, 557; ii, 582.
1907 B, 214.
1920 C, 573.
1923 A, 105.
Jordan and Beal 1913 A, 256.
Jordan and Gilbert 1882 A, 50.
Kingsley, J. S. 1925 A, 233, fig. 246.
Kner, R. 1860 B, 817.
Köstlin, O. 1844 A.
Leigh-Sharpe, W. H. 1926 A, 342.
Leriche, M. 1902 B, 101.
1905 A, 102.
1906 C, 418.
Leunis and Ludwig 1883 A, 792.
Mantell, G. A. 1844 A, 629.
Meckel, J. F. 1825 A (Raja).
Müller and Henle 1838 A, 91.
Owen, R. 1868 A, 894.
Priem, F. 1903 A, 396.
Priem, F. 1904 A, 285.
1908 B, 75, 93, figs. 48, 49.
1912 A, 242.
Probst, J. 1886 B, 305 (Myliobates).
Radcliffe, L. 1916 A, 277, pl. xlviii.
Ridewood, W. G. 1896 A, 381, 384.
1921 A, 392, fig. 37.
Sabatier, A. 1903 B, 1218 (Myliobates).
Semon, R. 1901 B, 132.
Serres, M. 1852 A, 117 (Myliobates).
Sloan, E. 1908 A, 278, 472.
Stannius, H. 1854 A.
Stefano, G. 1912 A, 413.
Stephan, P. 1900 A, 409.
Storms, R. 1891 A, 120 (Myliobates).
Stromer, E. 1904 A, 249.
1904 B, 203.
1905 B, 39.
1917 A, 19 (Mylobates).
Terra, P. 1911 A, 97, fig. 26.
Tomes, C. S. 1898 C, 346 (Myliobatis).
Weidenreich, F. 1926 A, 47.
Weiler, W. 1922 A, 96, pls. i, iii.
Woodward, A. S. 1889 I, 3, figs. 1, 2.
Zittel and Koken 1911 A, 67.
Zittel and Schlosser 1923 A, 73, figs. 123-125.
Zittel and Woodward 1902 A, 44.

Myliobatis bisulcus Marsh.

Hay, O. P. 1902 A, 320.
Fowler, H. W. 1911 A, 85, 87.
Eocene (Shark River); New Jersey.

Myliobatis copeanus Clark.

Hay, O. P. 1902 A, 320.
Clark and Miller 1912 A, 117, 118.
Eastman, C. R. 1901 B, 99, pl. xii, figs. 1, 2; pl. xiii, figs. 2*a*, 2*b*, 6, 7*a*, 7*b*.
Leriche, M. 1906 C, 187 (Syn. of M. dixoni).
Eocene (Nanjemoy and Aquia); Virginia, Maryland.

Myliobatis fastigiatus Leidy.

Hay, O. P. 1902 A, 320.
Eastman, C. R. 1904 H, 74.
Fowler, H. W. 1911 A, 85, figs. 41, 42.
Hussakof, L. 1908 A, 32.
Eocene (Shark River); New Jersey.

Myliobatis frangens Eastman.

Eastman, C. R. 1904 H, 75, pl. xxix, fig. 3.
Shattuck, G. B. 1904 A, xcvi.
Miocene (Calvert); Maryland.

Myliobatis gigas Cope.

Hay, O. P. 1902 A, 320.
Eastman, C. R. 1904 H, 73, pl. xxviii, fig. 3; pl. xxix, fig. 1.
Shattuck, G. B. 1904 A, xcvi.
Miocene (Calvert); Maryland.

Myliobatis glottoides Cope.

Hay, O. P. 1902 A, 320.
Eastman, C. R. 1904 H, 73.
Fowler, H. W. 1911 A, 88, fig. 43.
Hussakof, L. 1908 A, 32, fig. 8.
Eocene (Shark River); New Jersey.

Myliobatis holmesii Gibbes.

Hay, O. P. 1902 A, 320.
Cope, E. D. 1867 C, 140.
Gibbes, R. W. 1850 B (No description).
1850 G, 299, pl. xlii, figs. 1-3.
Leidy, J. 1877 A, 234.
Woodward, A. S. 1889 D, 122.
(Phosphate beds); South Carolina.

Myliobatis jugosus Leidy.

Hay, O. P. 1902 A, 320.
Fowler, H. W. 1911 A, 90, fig. 45.
Leriche, M. 1905 A, 182, fig. 52 (This species?).
1906 B, 352 (This species?).
1906 C, 192, fig. 38.
Eocene (Manasquan?); New Jersey.

Myliobatis kummeli Fowler.

Fowler, H. W. 1911 A, 95, figs. 49, 50.
Miocene (Kirkwood); New Jersey.

Myliobatis leidyi Hay.

Hay, O. P. 1902 A, 320.
Eastman, C. R. 1904 H, 73.
Fowler, H. W. 1911 A, 91, fig. 46.
Upper Cretaceous (Manasquan); New Jersey.

Myliobatis magister Leidy.

Leidy, J. 1877 A, 233, pl. xxxiii, fig. 7.
Eastman, C. R. 1901 B, 100, pl. xii, fig. 3; pl. xiii, figs. 1*a*, 1*b*.
1904 H, 74.
Fowler, H. W. 1911 A, 89, fig. 44.
Leidy, J. 1876 E, 86 (No description).
Upper Eocene (Manasquan); New Jersey: Eocene; South Carolina.

Myliobatis mordax Leidy.

Hay, O. P. 1902 A, 320.
Phosphate beds; South Carolina.

Myliobatis obesus (Leidy).

Hay, O. P. 1902 A, 320 (M. rugosus in part).
Fowler, H. W. 1911 A, 93, fig. 48.
Berry, E. W. 1916 A, 360.
Upper Cretaceous (Hornerstown, Vincentown, Manasquan); New Jersey: (Monmouth); Maryland,

Myliobatis pachyodon Cope.

Hay, O. P. 1902 A, 320.
Eastman, C. R. 1904 H, 74, 75, pl. xxix, fig. 2.
Shattuck, G. B. 1904 A, xcvi.
Miocene (Calvert); Maryland.

Myliobatis pachyrhizodus Fowler.

Fowler, H. W. 1911 A, 97, fig. 51.
Cretaceous (Manasquan); New Jersey.

Myliobatis rectidens Cope.

Hay, O. P. 1902 A, 320.
Eastman, C. R. 1904 H, 73.
Fowler, H. W. 1911 A, 92, fig. 47.
Hussakof, L. 1908 A, 32, fig. 9.
Upper Cretaceous (Navesink-Hornerstown); New Jersey.

Myliobatis rugosus Leidy.

Hay, O. P. 1902 A, 320.
Eocene; New Jersey.

Myliobatis transversalis Gibbes.

Hay, O. P. 1902 A, 320.
Eocene; South Carolina.

Myliobatis vicomicanus Cope.

Hay, O. P. 1902 A, 320.
Miocene (Calvert); Maryland.

Myliobatis sp. indet.

Hay, O. P. 1902 A, 320.
Hay, O. P. 1923 A, 381. Pleistocene (Early); Florida.
Hopkins, F. V. 1871 A, 13. Eocene; Louisiana.
Tuomey, M. 1848 A, 165, 166. Eocene; South Carolina.

MESOBATIS Leidy. Type *Aëtobatus eximius* Leidy.

Hay, O. P. 1902 A, 320.
Jordan, D. S. 1923 A, 105.

Mesobatis eximius Leidy.

Hay, O. P. 1902 A, 320.
Phosphate beds; South Carolina.

STOASODON Cantor. Type *Raja narinari* (Euphrasen).

Unless otherwise indicated the authors, as quoted, use *Aëtobatus*.
Hay, O. P. 1902 A, 321.
Abel, O. 1906 C, 82 (Aëtobatis).
1912 F, 565 (Aëtobatis).
Arldt, T. 1923 A, 489 (Aëtobatis).
Bridge, T. W. 1904 A, 465, 729 (Aëtobatis).
Bronn, H. G. 1848 A, 18 (Aëtobatis).
1849 A, 638 (Aëtobatis).
Coulon, L. 1903 A, 131 (Aëtobatis).
Duméril, A. 1856 A, 145 (Aetobatys).
Eastman, C. R. 1901 B, 101 (Aëtobatis).
Fowler, H. W. 1911 A, 98 (Aetobatus).
Garman, S. 1908 A, 252.
1913 A, 428.
Giebel, C. G. 1855 A, 117 (Aëtobatis).
Gill, T. 1865 B, 135 (Aëtobatis).
Gudger, E. W. 1914 A.
Hamburger, R. 1904 A, 73.
Hay, O. P. 1901 B, 68.
1909 C, 59.
Heilprin, A. 1887 A, 300 (Aëtobatis).

Jordan, D. S. 1905 A, i, 557.
1907 B, 214.
1919 B, 242.
1923 A, 105.
Jordan and Beal 1913 A, 256 (Stoasodon).
Jordan and Evermann 1917 A, 95.
Jordan and Gilbert 1882 A, 50, 879 (Stoasodon).
Jordan and Hannibal 1923 A, 59 (Aëtobatus).
Klaatsch, H. 1901 A, 435.
Leriche, M. 1905 A, 107.
1906 C, 411 (Aëtobatis).
Müller and Henle T. 1838 A, 91 (Aëtobatis).
Owen, R. 1845 B, 46, pl. xxv, figs. 3, 4 (Myliobates, Aëtobatis).
Priem, F. 1903 A, 399.
1904 A, 286.
1908 B, 76, 94 (Aëtobatis).
Radcliffe, L. 1916 A, 278.
Ridewood, W. G. 1896 A, 384, 388.
Stromer, E. 1904 A, 260 (Aëtobatis).
1904 B, 205, fig. 3 (Aëtobatis).
Stannius, H. 1854 A (Aëtobatis).
Woodward, A. S. 1889 I, 5 (Aëtobatis).
Zittel and Koken 1911 A, 68.
Zittel and Schlosser 1923 A, 74 (Aëtobatis).
Zittel and Woodward 1902 A, 44.

Stoasodon aragonis Jordan and Hannibal.

Jordan and Hannibal 1923 A, 60, 61, pl. iii, figs. *m*, *p* (Aëtobatus).
Eocene (Arago); Oregon, California: (Tejon); California.

Stoasodon arcuatus (Agassiz).

Hay, O. P. 1902 A, 321 (Aëtobatus).
Clark and Miller 1912 A, 117, 118 (Aëtobatus).
Eastman, C. R. 1901 B, 102, pl. xiii, figs. 3*a*, 3*b*, 8 (Aëtobatus).
1904 H, 76, pl. xxix, fig. 5 (Aëtobatus).
Leriche, M. 1906 A, 295 (Aëtobatus).
Priem, F. 1912 A, 225 (Aëtobatus).
Shattuck, G. B. 1904 A, xcvi (Aëtobatus).
Miocene (Calvert and St. Mary's); Maryland: Eocene (Nanjemoy and Aquia); Maryland, Virginia.

Stoasodon merriami (Jordan and Beal).

Jordan and Beal 1913 A, 245, 256, fig. 6 (Myliobatis).
Jordan and Gilbert 1919 A, 23 (Myliobatis).
Jordan and Hannibal 1923 A, 60, pl. iii, fig. *z*; pl. iv, fig. i (Aëtobatis).
Miocene (Monterey); California.

Stoasodon narinari (Euphrasen).

Euphrasen, Bengt. And., 1790, Vet. Akad. Nya Handl., xi, 217 (Raja).
Coles, R. J. 1910 A, 338 (Aëtobatus).
Duméril, A. 1865 A (1870), 641 (Aëtobatus).
Gudger, E. W. 1910 A, 58 (Aëtobatus).
1914 A, pls. and figs. (Aëtobatus).
Hay, O. P. 1917 E, 43 (Aëtobatus).
1923 A, 382, 383 (Aëtobatis).
Jaekel, O. 1911 A, 58 (Aëtobatus).
Jordan, D. S. 1905 A, i, 557, fig. 349 (Aëtobatus).
1907 B, 214, fig. 155 (Aëtobatus).
Jordan and Evermann 1896 A, 88 (Aëtobatus).
1900 A, pl. xvi (Aëtobatus).
Owen, R. 1845 B, 47, pl. xxv, figs. 3, 4 (Myliobates, Aëtobates, Aëtobatis).
Radcliffe, L. 1916 A, 278, pl. xlvii (Aëtobatus).
Stannius, H. 1854 A, 90 (Aëtobatis).
Recent; Atlantic Coast to Virginia: Pleistocene; Florida.

Stoasodon perspicuus (Leidy).

Hay, O. P. 1902 A, 321 (Aëtobatus).
Fowler, H. W. 1911 A, 99, fig. 52 (Aëtobatus).
Eocene? (Shark River?); New Jersey.

Stoasodon profundus (Cope).

Hay, O. P. 1902 A, 321 (Aëtobatus).
Eastman, C. R. 1904 H, 76 (Aëtobatus).
Miocene (Calvert); Maryland.

Stoasodon smithii Jordan and Beal.

Jordan and Beal 1913 A, 254, fig. *b*.
Agassiz, L. 1857 A, 316, fig. (Zygobatis sp.).
Jordan and Hannibal 1923 A, 59, pl. iii, figs. *a*, *h*, *n*; pl. iv, fig. *f* (Aëtobatis).
Oligocene (Vanqueros): Miocene (Monterery): San Pablo Jacalitos): Pliocene (San Diego): Pleistocene (Upper San Pedro). All in California.

Stoasodon sp. indet.

Jordan, D. S. 1907 A, 119 (Aëtobatus). Miocene; California.

PLINTHICUS Cope. Type *P. stenodon* Cope.

Hay, O. P. 1902 A, 321.
Fowler, H. W. 1911 A, 100.
Jordan, D. S. 1923 A, 105.

Plinthicus stenodon Cope.

Hay, O. P. 1902 A, 321.
Fowler, H. W. 1911 A, 100, fig. 53.
Hussakof, L. 1908 A, 33, fig. 10.
Miocene (Kirkwood); New Jersey.

RHINOPTERIDÆ Jordan.

Jordan, D. S. 1923 A, 105.

RHINOPTERA Kuhl. Type *Myliobatis marginatus* Geoff. St. Hilaire.

Hay, O. P. 1902 A, 321.
Arldt, T. 1923 A, 489.
Bateson, W. 1892 A, 112, fig. 5.
Bridge, T. W. 1904 A, 465.
Fowler, H. W. 1911 A, 101.
Garman, S. 1908 A, 252.
1913 A, 443.
Giebel, C. G. 1855 A, 117 (Zygobates).

Hay, O. P. 1901 B, 68.
Jordan, D. S. 1905 A, i, 557.
1907 B, 214.
1919 B, 173.
Jordan and Evermann 1898 A, 90.
Jordan and Gilbert 1882 A, 51.
Müller and Henle 1838 A, 91.
Owen, R. 1866 A, 82.
Ridewood, W. G. 1921 A, 391, fig. 36.
Stannius, H. 1854 A.
Stromer, E. 1904 A, 251 (Zygobatis).
Woodward, A. S. 1889 I, 5.
Zittel and Schlosser 1923 A, 74.

Rhinoptera dubia Leidy.

Leidy, J. 1855 C, 396 (Zygobates).
Hay, O. P. 1902 A, 321.
Fowler, H. W. 1911 A, 102, figs. 54-57.
Leidy, J. 1877 A, 247, pl. xxxi, figs. 21-37. (Zygobates).
Upper Eocene; New Jersey: Miocene; Maryland, New Jersey.

Rhinoptera smithii Jordan and Beal.

Jordan and Beal 1913 A, 246, 254, fig. *e.*
Jordan and Gilbert 1919 A, 23.
Miocene (Monterey); California.

Rhinoptera sp. indet.

Hay, O. P. 1902 A, 321 Miocene; California.
Blake, W. P. 1857 A, 172 (Zygobates). Miocene; California.

MOBULIDÆ Gill.

Gill, T. 1893 A, 130.
Hay, O. P. 1902 A, 321 (Mantidæ).
Backman, G. 1913 A, 48 (Ceratopterina).
Fitzinger, L. J. 1873 A, 57 (Cephalopteræ).
Garman, S. 1913 A, 448.
Gill, T. 1908 B, 162.
Jordan, D. S. 1905 A, i, 559.
Jordan, D. S. 1907 B, 216, 759.
1923 A, 105.
Leigh-Sharpe, W. H. 1926 A, 342 (Dicerobatidæ).
Pellegrin, J. 1912 A, 91 ("diables de mer").
1912 B, 721 ("diables de mer").
Radcliffe, L. 1916 A, 279.

MANTA Bancroft. Type *Raia birostris* Walbaum.

Hay, O. P. 1902 A, 321.
Abel, O. 1919 A, 131, figs. 93, 94 (Ceratoptera).
Arldt, T. 1923 A, 489 (Ceratoptera).
Bridge, T. W. 1904 A, 465 (Ceratoptera).
Coles, R. J. 1916 A, 217, 8 figs.
1916 B, 649, figs. 1-5.
Duméril, A. 1856 A, 146 (Ceratoptera).
Garman, S. 1913 A, 449, 454.
Gill, T. 1908 B, 176.
Holmes, F. S. 1856 A, 39, pl. iii (Diabolichthys).
Jaekel, O. 1902 B, 134 (Ceratoptera).
Jordan, D. S. 1905 A, i, 560; ii, 580.
1907 B, 217.
Jordan, D. S. 1923 A, 105.
Jordan and Gilbert, 1882 A, 52.
Müller and Henle 1837 A, 401 (Ceratoptera).
1838 A, 91 (Ceratoptera).
Pellegrin, J. 1912 A, 91.
1912 B, 722.
Radcliffe, L. 1916 A, 279, 280.

Manta unios (Leidy).

Hay, O. P. 1902 A, 322.
Gill, T. 1908 B, 160 (Ceratoptera).
Phosphate beds; South Carolina.

Subclass HOLOCEPHALA Bonaparte.

Unless otherwise indicated the authors, as quoted, employ the name Holocephala, or Holocephali.
Hay, O. P. 1902 A, 322.
Abel, O. 1912 F, 440, 448, 677.
1919 A, 140.
1920 A, 330 ("holocephalen").
Allis, E. P. 1905 A, 495.
1915 A, 593 ("holocephalen").
1926 B, 334.
Arldt, T. 1907 D, 658.
1923 A, 490 ("holocephalen").
Backman, G. 1915 A.
Bardeleben, K. 1903 A, 20 ("holocephalen").
Bessels, E. 1869 A, 153 ("holocephalen").
Boas, J. E. V. 1914 B ("chimären").
Bonaparte, C. L. 1831 A, 98, 121 (Acanthorrini).
1838 C, 214.
1840 A, 46.
Bridge, T. W. 1896 A, 534.
1904 A, 466, 743.
Bronn, H. G. 1849 A, 830, seq.
Carter, J. T. 1905 A, 136.
Carus, V. 1875 A, 598.
Collinge, W. E. 1895 C, 888.
Cope, E. D. 1871 T, 449.
1885 BB, 64.
1891 N, 10, 14 (Holocephali, Chimæroidei).
Coulon, L. 1903 A, 132 ("holocéphales").
Cunningham, J. T. 1912 A, 246.
Day, E. C. H. 1865 A, 565.
Dean, B. 1900 A, 22, 27 (Holocephali).
1900 C, 169.
1903 A, 285 ("holocephala").
1906 B, ("chimaeroids").
1909 C, 243.
Dollo, L. 1889 E, 152 ("chimères").
1896 A, 110 ("holocéphales").
1904 C, 47 ("holocéphales").
1906 B, 135 ("holocéphales").
1907 B, 100 ("holocéphales).
Eastman, C. R. 1907 B, 23, 65.
1908 A, 69, 117.
1911 A, 20.
Fahrenholz, C. 1915 A, 407 ("holocephalen").
Fitzinger, L. J. 1873 A, 53.

Fowler, H. W. 1911 A, 108.
Frassetto, F. 1915 A ("olocefali").
Fuchs, H. 1909 B, 165 ("holocephalen").
Fürbringer, K. 1903 A, 362.
Fürbringer, M. 1902 A, 186 ("holocephalen").
1904 A ("holocephalen").
1904 B, 458 ("holocephalen").
Garman, S. 1904 A, 243 (Chismopnea).
1911 A, 81 (Chismopnea).
1913 A, 9 (Chismopnea).
Gaupp, E. 1898 B, 860 ("holocephalen").
1905 D, 873 ("holocephalen").
Gegenbaur, C. 1867 B, 378.
Gill, T. 1905 A, 657.
Goodrich, E. S. 1904 A, 471.
1909 A, 168.
Greene, J. R. 1861 A, 227.
Gregory, W. K. 1904 A, 58.
1907 D, 447.
Haeckel, E. 1868 A, 443, 444.
1873 A, 516.
1893 A, xviii.
Hase, A. 1907 A, 655 ("holocephalen").
Hilzheimer, M. 1913 A, 470.
Hoernes, R. 1886 A, 539.
Huber, O. 1901 A, 598.
Huxley, T. H. 1863 F, 372.
1876 E, 103.
Imms, A. D. 1905 A, 46.
Jacobshagen, E. 1920 A, 88 ("holocephalen").
Jaekel, O. 1901 A, 556 ("holocephalen").
1903 D, 59 ("holocephalen").
1903 F, 36 ("holocephalen").
1903 G, 383 ("holocephalen").
1906 C, 156 ("holocephalen").
1906 D, 180 ("holocephalen").
1911 A, 52.
1913 A, 91 ("holocephalen").
1919 A, 75, 91, 93.
1926 A, 172 ("holocephalen").
Jordan, D. S. 1905 A, i, 508, 561; ii, 575.
1907 B, 182, 219, 759.
1923 A, 105 (Chimæroidei).
Jordan and Gilbert 1882 A, 53.
1885 A, 71.
Keyes, C. 1922 A, pl. iii.
Kiaer, J. 1924 A, 108.
1928 A, 131.
Kingsley, J. S. 1900 A, 249.
1925 A, 654.
Klaatsch, H. 1893 B, 666 ("holocephalen").
1893 C, 148 ("holocephalen").
Lakjer, T. 1927 A, 289 ("holocephalen").
Latreille, P. A. 1825 A, 111 (Acanthorina).
Leigh-Sharpe, W. H. 1926 A, 336, 342.
Leunis and Ludwig 1883 A, 781.
Lönnberg, E. 1901 A.
1902 A.
Luther, A. 1909 A, 3, 30 ("holocephalen").
Lütken, C. 1868 C (Chimærini).
Mayhew, R. L. 1924 A, 331 ("chimæras).
Meek, A. 1916 A, 46, 412.
Müller, J. 1845 A, 137.
Nishi, S. 1920 A, 27 ("chimären").
Owen, R. 1845 B, 64 ("chimaeroids").
1866 A, 12, 35, 41.
Parker, T. J. 1886 A, 635.
Parker and Haswell 1897 A, 173.
Patten, W. 1912 A, 385.
Petronievics, B. 1919 A, 412 ("holocéphales").
Pompeckj, J. F. 1913 A, 1131.
Priem, F. 1908 B ("holocéphales").
Rabinerson, A. 1925 A, 450, 483.
Rabl, C. 1901 A, 489 ("holocephalen").
Rauther, M. 1913 A, 1099.
Regan, C. T. 1906 A, 726 (Chasmatopnea).
1912 A, 836.
Reis, O. M. 1893 A, 509 ("holocephalen").
1894 A, 62 ("holocephalen").
Reynolds, S. H. 1897 A, 106, 109, 111, 121, 543.
Ridewood, W. G. 1896 A, 386.
Rosén, N. 1916 A, 11.
Roth, W. 1911 A, 514.
Ryder, J. 1886 A, 74.
Sabatier, A. 1904 A, 249 ("holocéphales").
Sagemehl, M. 1883 A ("holocephalen").
Schauinsland, H. 1906 A, 360 ("holocephalen").
Schlosser, M. 1917 A, 136, 137, 139 ("holocephalen").
Schmalhausen, J. J. 1913 A, 61.
1918 A, 208.
1923 A, 537.
Semon, R. 1901 B, 133 ("holocephalen").
Sewertzoff, A. N. 1923 B.
1926 A, 536.
Shann, E. W. 1919 A, 532.
Stannius, H. 1854 A (Chimaerae).
Steinmann, G. 1907 A, 405.
Stensiö, E. A. 1925 B, 188.
Stephan, P. 1900 A, 313 ("holocéphales").
Stromer, E. 1912 A, 24, 48.
Suschkin, P. 1910 A, 248 ("holocephalen").
Terra, P. 1911 A, 204 (Holocephali).
Traquair, R. H. 1900 C, 506.
Van Wijhe, J. W. 1922 A, 291 ("holocephalen").
Versluys, J. 1922 B, 102.
Wilder, B. 1876 A, 183.
Woodward, A. S. 1915 B, lxix.
1922 C, 76.
1924 B, 338.
Zittel and Koken 1911 A, 69.
Zittel and Schlosser 1923 A, 47.
Zittel and Woodward 1902 A, 44.

Order CHIMÆROMORPHI, new name.

Superfamily CHIMÆROIDÆ new form.

Hay, O. P. 1902 A, 322 (Chimæroidea).
Barrell, J. 1915 B, 393.
Dean, B. 1900 A, 28 ("chimæroids").
1906 B, ("chimæroids").
1908 A, 204 ("chimæroids").
1912 A, 227 ("chimæroids").
Dollo, L. 1904 C, 47 ("chiméroides").
Eastman, C. R. 1900 J, 287 ("chimæroids").
1907 B, 23, 66 (Chimæroidei).
1908 A, 69, 118 (Chimæroidei).
Fowler, H. W. 1911 A, 109 (Chimæroidea).
Garman, S. 1904 A, 245 ("chimæroids").

Gegenbaur, C. 1870 C, 399 ("chimären").
Gill, T. 1905 B, 60 ("chimæroid").
Gregory, W. K. 1907 D, 447 (Chimæroidea).
Haeckel, E. 1873 A, 516 (Chimæracei).
Hussakof, L. 1906 A, 124 ("chimæroids").
Huxley, T. H. 1876 A, 57, 59 (Chimæroidei).
1876 E, 121, 124 (Chimæroidei).
Huxley, T. H. 1883 B, 571 (Chimæroideri).
Jaekel, O. 1901 A, 540 ("chimäriden").
Owen, R. 1845 B, 64 ("chimæroids").
1846 E, 51 (Chimæroidei).
Parker, T. J. 635 (Chimæra).
Regan, C. T. 1912 A, 836 (Chasmatopnea).
Woodward, A. S. 1921 B, 39 ("chimæroids").

CHIMÆRIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 98.
Hay, O. P. 1902 A, 323.
Abel, O. 1912 F, 665 ("chimæriden").
1919 A, 143.
Agassiz, L. 1844 D, 142 ("chimæridés").
Allis, E. P. 1917 A, 133 ("chimæroids").
Arldt, T. 1907 D, 645.
1923 A, 490 ("chimæriden").
Backman, G. 1915 A.
Bonaparte, C. L. 1833 B, 1203.
Bridge, T. W. 1904 A, 468.
Briquel, P. 1898 A, 16 ("chimères").
Cunningham, J. T. 1912 A, 246.
Cuvier, G. 1805 A ("chimères").
1815 A, 127 ("chimères").
Day, E. C. H. 1865 A, 565 ("Chimæroids").
Dean, B. 1900 C, 169 ("chimæroids").
1903 A, 270, 284 ("chimæroid").
1904 A, 51 ("chimæroid fishes").
1904 E, 105 ("chimæroids").
1906 B, ("chimæroids").
1912 B, 37 ("chimæroids").
Dollo, L. 1904 C, 50.
Egerton, P. G. 1852 C, 6B, 2 ("chimæroids").
Fitzinger, L. J. 1873 A, 54 (Chimærae).
Fowler, H. W. 1911 A, 109.
Fürbringer, M. 1902 A, 172 ("chimæriden").
1904 B ("chimäriden").
Garman, S. 1904 A, 271.
1911 A, 82.
1913 A, 9.
Gaupp, E. 1898 B, 841 ("chimæren").
Gegenbaur, C. 1866 A, 123 ("chimæren").
1867 B, 391 ("chimæren").
1870 B, 448 ("chimæren").
Goodrich, E. S. 1909 A, 176.
Gregory, W. K. 1907 D, 447.
Hay, O. P. 1901 B, 68.
Hoernes, R. 1866 A, 539.
Huber, O. 1901 A, 636.
Humphreys, J. 1908 A, 11 ("chimæras").
Huxley, T. H. 1859 D, 418 (Chimæræ).
1876 E, 86.
Jaekel, O. 1901 A, 540 ("chimäriden").
1902 A, 107 ("chimäriden").
1903 G, 386 ("chimäriden").
1928 A, 43 ("chimæren").
Jordan, D. S. 1905 A, i, 564.
1907 B, 221, 759.
1923 A, 106.
Jordan and Gilbert 1882 A, 53.
Kingsley, J. S. 1885 A, 72.
Köstlin, O. 1844 A ("chimären").
Leriche, M. 1906 C, 273.
Leunis and Ludwig 1883 A, 781.
Meckel, J. F. 1825 A ("chimæren").
Owen, R. 1846 E, 51 (Edaphodontidæ).
1866 A, 13.
Parker and Haswell 1897 A, 174.
Pompeckj, J. F. 1913 A, 1132 ("chimæriden").
Rauther, M. 1913 A, 1099.
Schauinsland, H. 1903 A, 5, pls. xii-xviii, xxi-xxiv (Callorhynchus).
Schlosser, M. 1917 A, 141.
Stannius, H. 1854 A (Chimæræ).
Storms, R. 1894 A, 67 ("chimérides").
Terra, P. 1911 A, 204.
Traquair, R. H. 1900 C, 506 ("chimæroids").
Wagner, R. 1843 A ("chimären").
Wallace, A. R. 1876 A, ii, 460.
Woodward, A. S. 1912 A (1909), 182.
1920 B, 5 ("chimæroids").
Zittel and Koken 1911 A, 70.
Zittel and Schlosser 1923 A, 76.
Zittel and Woodward 1902 A, 46.

CHIMÆRA Linn. Type *C. monstrosa* Linn.

Hay, O. P. 1902 A, 324.
Abel, O. 1912 F, 440, fig. 324.
Allis, E. P. 1905 A, 472.
1909 A, 74.
1917 A, 105, pls. i-iii.
1922 B, 199.
1923 B, 156.
Arldt, T. 1923 A, 490.
Bessels, E. 1869 A, 154.
Braus, H. 1906 B, 553.
Bridge, T. W. 1904 A, 469, 735.
Bronn, H. G. 1848 A, 290.
Collinge, W. E. 1895 C, 878.
Davidoff, M. 1879 A, 470.
Dean, B. 1900 A, 28.
1904 B, 14.
Evans, H. M. 1923 A, 16, 29.
Garman, S. 1911 A, 83.
Gaupp, E. 1905 D, 873.
Goette, A. 1878 A, 841.
Goodrich, E. S. 1901 A, 313, fig. B.
Gregory, W. K. 1904 A, 57, fig. 11.
Hay, O. P. 1901 B, 68.
Hoeven, J. 1822 A.
Huxley, T. H. 1863 F, 372, 428, figs. 30, 31.
1869 G, 453.
Jaekel, O. 1901 A, 547.
1903 F, 36 (Chimarra).
1905 C, 146, fig. 14.
1906 A, 16, fig. 9.
1926 A, 173.
1926 B, 42 ("chimæren").
1926 D, 71 ("holocephalen").
Jaquet, M. 1897 A, 174, pls. v-viii.
1898 B, 300, pls. xxiv-xxix.
1900 A, 60.

Jordan, D. S. 1905 A, i, 563; ii, 563.
1917 A, 11.
1923 A, 106.
Jordan and Evermann 1917 A, 11.
Kerr, J. G. 1908 A, 169.
Kingsley, J. S. 1925 A, 29, 88, figs. 30, 91.
Klaatsch, H. 1893 A, 148.
Kolmer, W. 1923 A, 529, figs. 1, 2 (Chimära).
Lakjer, T. 1927 A, 283.
Leidig, F. 1851 A, 241.
Leigh-Sharpe, W. H. 1926 A, 343.
Luther, A. 1909 A, 31.
Meek, A. 1916 A, 45, 46.
Mivart, St. G. 1878 B, 331.
Nishi, S. 1920 A, 28, figs. 1-8.
Norman, E. W. 1926 A, 452.
Parker, W. K. 1879 C, 336.
Parker and Haswell 1897 A, 174, figs. 799-802.
Rabinerson, A. 1925 A, 443, 450, fig. 3; 483. fig. 1; 513.
Reynolds, S. H. 1897 A, 536.
Romer, A. S. 1928 A, 433.
Ryder, J. 1885 E, 91.
Sewertzoff, A. N. 1923 A, 391.
Schmalhausen, J. J. 1916 C, 213.
Shann, E. W. 1919 A, 547.
Solger, B. 1879 A, 95, pl. viii.
Stephan, P. 1900 A, 311.
Versluys, J. 1922 B, 98.
Zittel and Schlosser 1923 A, 75, fig. 129.
At present no fossil American species of this genus is known.

EDAPHODON Buckland. Type *Chimæra mantelli* Buckland.

Hay, O. P. 1902 A, 324.
Abel, O. 1919 A, 145, fig. 111.
Bronn, H. G. 1848 A, 452.
1849 A, 637.
Coulon, L. 1903 A, 133 (Ischyodus).
Dean, B. 1906 B, 134, 150, fig. 123.
1909 C, 259 (Ischyodus).
Egerton, P. G. 1843 A, 155 (Ischyodus).
1852 C, 6 B, 2.
Fowler, H. W. 1911 A, 110.
Giebel, C. G. 1855 A, 118.
Hay, O. P. 1901 B, 68.
Hussakof, L. 1912 A, 202, fig. 18*a*.
Jaekel, O. 1901 A, 547.
Jordan, D. S. 1919 B, 191.
1923 A, 106.
Leriche, M. 1905 A, 137.
1906 C, 414.
Newton, E. T. 1876 A, 329.
Owen, R. 1845 B, 66, 67.
Priem, F. 1907 C, 42.
1908 B, 42.
Probst, J. 1886 B, 312.
Storms, R. 1894 A, 73.
Woodward, A. S. 1912 A (1909), 183, pl. xxxix, text-figs. 52-55.
1912 A (1911), 185, pls. xl, xli.
1922 C, 76, fig. 77.
Zittel and Koken 1911 A, 72.
Zittel and Schlosser 1923 A, 77, fig. 132.
Zittel and Woodward 1902 A, 48.

Edaphodon agassizi (Buckland).

Buckland, W. 1835, Proc. Geol. Soc. Lond., ii, 206 (Chimaera).
Hay, O. P. 1902 A, 324 (E. smockii).
Agassiz, L. 1843 B, 341, pl. xl, *a*, figs. 3, 4; pl. xl, *c*, fig. 16 (Chimæra).
Egerton, P. G. 1843, Proc. Geol. Soc. Lond., iv, 156 (Ischyodus).
Fowler, H. W. 1911 A, 115, fig. 66 (E. smockii).
Geinitz, H. B. 1875 A, 206, pl. xxxix, figs. 8-10 (Chimæra).
Hussakof, L. 1908 A, 39, pl. ii, figs. 4, 5 (E. smockii).
1912 A, 213, figs. 10, 11 (Ischyodus smockii a syn.).
Newton, E. T. 1878 C, 12, pl. iii.
Woodward, A. S. 1891 A, 77.
Cretaceous (Danian); Europe: Cretaceous (Hornerstown); New Jersey.

Edaphodon eocænus (Cope).

Hay, O. P. 1902 A, 324.
Fowler, H. W. 1911 A, 116, fig. 67.
Hussakof, L. 1908 A, 37, fig. 14.
Eocene (Shark River); New Jersey.

Edaphodon laqueatus (Leidy).

Hay, O. P. 1902 A, 324.
Hussakof, L. 1912 A, 200, 217, fig. 13.
Upper Cretaceous; Mississippi.

Edaphodon laterigerus (Cope).

Hay, O. P. 1902 A, 324.
Fowler, H. W. 1911 A, 113, fig. 65.
Hussakof, L. 1908 A, 38, pl. i, figs. 7, 8.
1912 A, 211, fig. 8.
Upper Cretaceous (Hornestown); New Jersey.

Edaphodon mirificus Leidy.

Hay, O. P. 1902 A, 324 (E. divaricatus, E. fecundus, E. gaskillii, E. incrassatus, E. latidens, E. longirostris, E. miersii, E. monolophus); 325 (E. solidulus).
Cope, E. D. 1871 G, 384 (Ischyodus solidulus).
Fowler, H. W. 1911 A, 113 (Ischyodus longirostris); 122, figs. 71-75 (E. mirificus); 119, figs. 69, 70 (E. fecundus); 118, fig. 68 (E. incrassatus); 124, fig. 76 (E. divaricatus); 128, fig. 78 (E. latidens); 123 (E. miersii); 127, fig. 77 (E. solidulus); 123 (Ischyodus monolophus, I. gaskilli).
Hussakof, L. 1908 A, 38; pl. ii, fig. 3, text-figs. 3-7 (E. mirificus); pl. i, figs. 1-4 (E. fecundus); pl. i, figs. 5, 6 (E. incrassatus); 38, text-fig. 15 (E. latidens); 39, pl. ii, figs. 1, 2 (E. solidulus).
1912 A, 204, pl. xix; pl. xx, figs. 1-3; text-figs. 2*a*-7 (E. divaricatus fecundus, gaskillii, incrassatus, latidens, longirostris, miersii, monolophus, solidulus, as syns.).
Upper Cretaceous (Hornerstown); New Jersey.

Edaphodon stenobryus (Cope).

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, iii, fig. 63.
Hussakof, L. 1908 A, 39, pl. ii, figs. 6, 7.
1912 A, 203, 213, figs. 2*e*, 9.
Upper Cretaceous (Hornerstown); New Jersey.

Edaphodon tripartitus (Cope).

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, 112, fig. 64.
Hussakof, L. 1908 A, 40, pl. iii, figs. 5, 6 (E. longirostus a syn.).
1912 A, 215, fig. 12 (E. sedgwicki).
Upper Cretaceous (Hornerstown); New Jersey.

Edaphodon sp. indet.

Fowler, H. W. 1911 A, 129-131, figs. 79-82 (Undetermined specimen).
Upper Cretaceous (Hornerstown); New Jersey.

ELASMODUS Egerton. Type *E.* (*Chimæra*) *hunteri Egert.*

Egerton, P. G. 1843 A, 156.
Dean, B. 1909 C, 267.
Egerton, P. G. 1847 A, 351.
Jordan, D. S. 1919 B, 214.
1923 A, 106.
Newton, E. T. 1876 A, 329.
Nicholson and Lydekker 1889 A, 951.
Woodward, A. S. 1898 B, 59, figs. 46, 47.
1891 A, 88.
Zittel, K. A. 1890 A, 112.

Elasmodus? gilli, new species.

Darton and Siebenthal 1910 A, 10 ("chimæroid fish").
Dean, B. 1909 C, 265, pl. xxxvii ("egg-capsule," Elasmodus?).
Gill, T. 1905 B, 601 ("chimæroid egg-case").
Hussakof, L. 1912 A, 224 ("fossil egg-case").
Upper Cretaceous (Mesaverda); Wyoming.

MYLOGNATHUS Leidy. Type *M. priscus* Leidy.

Hay, O. P. 1902 A, 325.
Dean, B. 1906 B, 134, 150.
Hay, O. P. 1901 B, 68.
Jordan, D. S. 1923 A, 106.
Osborn, H. F. 1902 I, 16.

Mylognathus priscus Leidy.

Hay, O. P. 1902 A, 325.
1903 D, 117.
Osborn, H. F. 1902 I, 11.
Paleocene (Fort Union); North Dakota.

BRYACTINUS Cope. Type *B. amorphus* Cope.

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, 134.
Hay, O. P. 1901 B, 68.
Hussakof, L. 1912 A, 223.
Jordan, D. S. 1919 B, 191 (syn. of Edaphodon).
1923 A, 106.

Bryactinus amorphus Cope.

Hay, O. P. 1902 A, 325.
Cope, E. D. 1875 E, 282, pl. xlv, fig. 13.
Fowler, H. W. 1911 A, 134; fig. 83.
Hussakof, L. 1908 A, 37, fig. 13.
1912 A, 223; figs. 19, 20.
Upper Cretaceous (Hornerstown); New Jersey.

ISOTÆNIA Cope. Type *I. neocæsariensis* Cope.

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, 135.
Hay, O. P. 1901 B, 68.
Hussakof, L. 1912 A, 222, fig. 18*b*.
Jordan, D. S. 1923 A, 106.

Isotænia neocæsariensis Cope.

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, 135, fig. 84.
Hussakof, L. 1908 A, 41; pl. iii, figs. 3, 4.
1912 A, 222, fig. 7.
Upper Cretaceous (Hornerstown); New Jersey.

LEPTOMYLUS Cope. Type *L. densus* Cope.

Hay, O. P. 1902 A, 325.
Dean, B. 1906 B, 134.
Fowler, H. W. 1911 A, 136.
Hussakof, L. 1912 A, 218.
Jordan, D. S. 1923 A, 106.
Palmer, T. S. 1904 A, 372, 843.
Storms, R. 1894 A, 73.

Leptomylus cookii Cope.

Hay, O. P. 1902 A, 325.
Cope, E. D. 1871 Q, 384.
Fowler, H. W. 1911 A, 137; fig. 85.
Hussakof, L. 1908 A, 41; pl. ii, figs. 8, 9.
1912 A, 219, fig. 14.
Upper Cretaceous (Navesink-Hornerstown); New Jersey.

Leptomylus densus Cope.

Hay, O. P. 1902 A, 325.
Cope, E. D. 1871 Q, 384.
Fowler, H. W. 1911 A, 138.
Hussakof, L. 1912 A, 218.
Upper Cretaceous (Navesink-Hornerstown); New Jersey.

Leptomylus forfex Cope.

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, 139; fig. 86.

Hussakof, L. 1908 A, 41; pl. iii, figs. 1, 2.
1912 A, 221; figs. 15, 16.
Upper Cretaceous (Navesink-Hornerstown); New Jersey.

SPHAGEPŒA Cope. Type *S. aciculata* Cope.

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, 143.
Hay, O. P. 1901 B, 68.
Jordan, D. S. 1923 A, 106.

Sphagepœa aciculata Cope.

Hay, O. P. 1902 A, 325.
Fowler, H. W. 1911 A, 144, fig. 89.

Hussakof, L. 1908 A, 50, fig. 22.
1912 A, 224, fig. 21.
Upper Cretaceous (Hornerstown); New Jersey.

The systematic positions of the following three genera are not known.

DICTYORHABDUS Walcott. Type *D. priscus* Walcott.

Hay, O. P. 1902 A, 325.
Clarke, J. M. 1895 A, 121 ("fossil fishes").
Jordan, D. S. 1905 A, i, 565, ii, 566.
1923 A, 106.
Romer, A. S. 1928 A, 433.
Stromer, E. 1920 A, 10.
Vaillant, L. 1902 A, 1321 ("poissons." This genus?).
Walcott, C. D. 1891 A, 245 ("fish").

Dictyorhabdus priscus Walcott.

Hay, O. P. 1902 A, 325.
Cockerell, T. D. A. 1908 C, 162.
Dean, B. 1906 B, 133, figs. 113, 114.
Eastman, C. R. 1907 B, 12, 67.
1908 A, 119.
Jaekel, O. 1892 C, 168 ("fish remains").
1895 D, 162.
Jordan, D. S. 1907 B, 222.
Merrill, G. P. 1907 A, 10.
Ordovician; Colorado.

HEDRONCHUS Cope. Type *H. sternbergi* Cope.

Hay, O. P. 1902 A, 326.
Cockerell, T. D. A. 1908 C, 162.
Jordan, D. S. 1923 A, 106.

Hedronchus sternbergi Cope.

Hay, O. P. 1902 A, 326.
Bowen, C. F. 1915 A, 118, 149, 150.

Cockerell, T. D. A. 1908 C, 162.
Hatcher, J. B. 1905 B, 69 (H. sternbergii).
Osborn, H. F. 1902 I, 11, 16.
Sternberg, C. H. 1903 C, 872 ("Hedronchus").
1914 A, 134.
Upper Cretaceous (Judith River); Montana.

MYLEDAPHUS Cope. Type *M. bipartitus* Cope.

Hay, O. P. 1902 A, 326.
Cockerell, T. D. A. 1908 C, 162.
Cope, E. D. 1880 U, 148.
Jordan, D. S. 1923 A, 106.
Osborn, H. F. 1902 I, 16.
Priem, F. 1901 A, 500.
Stanton and Hatcher 1905 A, 38.
Sternberg, C. H. 1909 A, 113.
1917 A, 84, 116.
Williston, S. W. 1902 K, 953 (=?Rhombodus).

Myledaphus bipartitus Cope.

Hay, O. P. 1902 A, 326.
Bowen, C. F. 1915 A, 118, 148, 149.
Brown, B. 1914 E, 378.
Cockerell, T. D. A. 1908 C, 162.
Gilmore, C. W. 1916 D, 302, pl. lxxvii, fig. 4 (This species?).
1924 D, 27.
Hatcher, J. B. 1903 D, 372.
1905 B, 68.
Hay, O. P. 1910 A, 313.
1910 B, 296.
Hussakof, L. 1908 A, 32, fig. 7.
Lambe, L. M. 1902 A, 28, pl. xix, figs. 1, 2.

Lambe, L. M. 1904 C, 21, 36, 41.
1907 B, 179.
1914 H, 398, 401.
1915 B, 120.
Matthew, W. D. 1916 A, 485.
Osborn, H. F. 1902 I, 11.
Peale, A. C. 1912 A, 746, 754.
Priem, F. 1901 F, 500.
Sternberg, C. H. 1903 B, 357.
1903 C, 871.
1909 C, 78, fig. 13.
1914 A, 134.
1915 A, 132.
1924 A, 68 (Myladephus).
Sternberg, C. M. 1926 A, 103, 104.
Williston, S. W. 1902 K, 953.
Upper Cretaceous (Judith River); Montana: (Belly River); Alberta: (Lance); Wyoming, Saskatchewan.

Myledaphus sp. indet.

Gilmore, C. W. 1920 A, 8. Upper Cretaceous (Kirtland); New Mexico.
Reeside, J. B. 1924 A, 23. Upper Cretaceous (Kirtland); New Mexico.

ICHTHYODORULITES.

Hay, O. P. 1902 A, 326.
Agassiz, L. 1835 B, 337.
1835 I, 101.
1839 A, 597.
Bronn, H. G. 1848 A, 604.
Dollo, L. 1889 F, 335.
Eastman, C. R. 1908 A, 150.
Fowler, H. W. 1911 A, 141.
Jordan, D. S. 1923 A, 96.
Reynolds, S. H. 1897 A, 106.
Zittel and Koken 1911 A, 72 ("ichthyodorylithen").
Zittel and Schlosser 1923 A, 78.
Zittel and Woodward 1902 A, 48.

ACONDYLACANTHUS St. John and Worth. Type *A. gracilis* St. John and Worth.

Hay, O. P. 1902 A, 329.
Hussakof, L. 1908 A, 43.
Jordan, D. S. 1920 C, 425.
1923 A, 96, 106.

Acondylacanthus æquicostatus St. John and Worth.

Hay, O. P. 1902 A, 329.
Hussakof and Bryant 1919 A, 156.
Mississippian (Keokuk); Illinois.

Acondylacanthus gracilis St. John and Worth.

Hay, O. P. 1902 A, 329.
Mississippian (Kinderhook); Iowa.

Acondylacanthus? mudgianus St. John and Worth.

Hay, O. P. 1902 A, 330.
Pennsylvanian; Kansas.

Acondylacanthus nuperus St. John and Worth.

Hay, O. P. 1902 A, 330.
Pennsylvanian; Illinois.

Acondylacanthus rectus St. John and Worth.

Hay, O. P. 1902 A, 330.
Pennsylvanian; Illinois.

AMACANTHUS St. John and Worth. Type *Homocanthus gibbosus* Newb. and Worth.

Hay, O. P. 1902 A, 329.
Jordan, D. S. 1923 A, 96.

Amacanthus gibbosus (Newb. and Worth.).

Hay, O. P. 1902 A, 329.
Mississippian (St. Louis); Missouri, Illinois.

ANODONTACANTHUS Davis. Type *A. acutus* Davis, here chosen.

Davis, J. D. 1881 B, 427.
Case, E. C. 1915 A, 124.
Hussakof, L. 1911 A, 162.
Hussakof and Bryant 1919 A, 157.
Jordan, D. S. 1920 C, 415 (Syn. of Oracanthus).
1923 A, 92.
Traquair, R. H. 1888 A, 101.
Woodward, A. S. 1889 D, 2 (Syn. Pleuracanthus).

Anodontacanthus americanus Hussakof.

Hussakof, L. 1911 A, 162, pl. xxvi, fig. 5.
Case, E. C. 1915 A, 96.
Permian (Wichita , Clear Fork); Texas.

Anodontacanthus pusillus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 156, pl. xliv, fig. 2.
Upper Devonian (Genesee); New York.

APATEACANTHUS Woodward. Type *A. vetustus* (Clarke).

Hay, O. P. 1902 A, 331.
Eastman, C. R. 1907 B, 80.
Jordan, D. S. 1923 A, 107.
Lydekker, R. 1914 A, 652.

Apateacanthus vetustus (Clarke, J. M.).

Hay, O. P. 1902 A, 331.
Clarke and Ruedemann 1903 A, 768 (Pristacanthus).
Eastman, C. R. 1907 B, 17, 81, 225, pl. iii, fig. 5.
Merrill, G. P. 1907 A, 17 (Pristacanthus).
Upper Devonian (Portage); New York.

ASTEROPTYCHIUS M'Coy. Type *A. ornatus* M'Coy.

Hay, O. P. 1902, A, 330.
Barkas, W. J. 1874 D, 544.
Bronn, H. G. 1849 A, 653.
Jordan, D. S. 1919 B, 239.

Asteroptychius bellulus St. John and Worth.

Hay, O. P. 1902 A, 330.
Pennsylvanian; Illinois, Iowa.

Asteroptychius elegans Newb.

Hay, O. P. 1902 A, 330.
Hussakof, L. 1908 A, 43.
Mississippian (Waverly); Michigan.

Asteroptychius gracilis Newb.

Hay, O. P. 1902 A, 330.
Hussakof, L. 1908 A, 43, fig. 17.
Mississippian (St. Louis); Illinois.

Asteroptychius keokuk St. John and Worth.

Hay, O. P. 1902 A, 330.
Mississippian (Keokuk); Illinois.

Asteroptychius sancti-ludovici St. John and Worth.

Hay, O. P. 1902 A, 330.
Mississippian (St. Louis); Illinois, Missouri.

Asteroptychius tenellus St. John and Worth.

Hay, O. P. 1902 A, 330.
Pennsylvanian; Kansas.

Asteroptychius? tenuis St. John and Worth.

Hay, O. P. 1902 A, 330.
Mississippian (Chester); Illinois.

Asteroptychius triangularis Newb. and Worth.

Hay, O. P. 1902 A, 330.
Mississippian (Burlington); Iowa.

Asteroptychius vetustus St. John and Worth.

Hay, O. P. 1902 A, 330.
Mississippian (Kinderhook); Iowa.

ATOPACANTHUS Hussakof and Bryant. Type *A. dentatus* Hussakof and Bryant.

Hussakof and Bryant 1919 A, 157.
Jordan, D. S. 1923 A, 97.

Atopacanthus dentatus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 19, 158, text-fig. 54*a*.
Upper Devonian (Portage); New York.

Atopacanthus peculiaris (Hussakof).

Hussakof, L. 1913 A, 247, pl. xlvii, figs. 4-6: text-fig. 2 (Apateacanthus).
Hussakof and Bryant 1919 A, 158.
Middle Devonian (Onondaga); New York.

BATACANTHUS St. John and Worth. Type *B. baculiformis* St. John and Worth.

Hay, O. P. 1902 A, 334.
Eastman, C. R. 1902 B, 87.
1903 B, 171.
1917 A, 257 (Syn. of Physonemus).
Jordan, D. S. 1923 A, 93, 106.

Batacanthus baculiformis St. John and Worth.

Hay, O. P. 1902 A, 334.
Eastman, C. R. 1917 A, 263 (Physonemus?).
Mississippian (Keokuk); Iowa, Missouri, Illinois?.

Batacanthus gigas Branson.

Branson, E. B. 1916 A, 656, pl. iv, figs. 3-6; text-fig. 4.
Pennsylvanian (Embar); Wyoming.

Batacanthus? necis St. John and Worth.

Hay, O. P. 1902 A, 334.
Eastman, C. R. 1917 A, 263 (Physonemus?).
Mississippian (Keokuk); Iowa.

Batacanthus stellatus (Newb. and Worth.).

Hay, O. P. 1902 A, 334.
Mississippian (Keokuk); Illinois, Missouri.

BYTHIACANTHUS St. John and Worth. Type *B. vanhornei* St. J. and Worth.

Hay, O. P. 1902 A, 331.
Jordan, D. S. 1923 A, 96.

Bythiacanthus? siderius (Leidy).

Hay, O. P. 1902 A, 331.
Cope, E. D. 1871 R, 440 (Asterocanthus iderius).
Mississippian (St. Louis); Tennessee, New Jersey?

Bythiacanthus vanhornei St. John and Worth.

Hay, O. P. 1902 A, 331.
Mississippian (St. Louis); Illinois.

Bythiacanthus sp. indet.

Cope, E. D. 1871 R, 440 ("Asterocanthus").
New Jersey.

COSMACANTHUS Agassiz. Type *C. malcolmsoni* Agassiz.

Hay, O. P. 1902 A, 330.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 545.
Bronn, H. G. 1848 A, 341.
1849 A, 653.
Evans, H. M. 1904 A, 400.
Jordan, D. S. 1919 C, 225.
1923 A, 96.
Jordan and Hannibal 1923 A, 30.

Cosmacanthus bullatus (St. John and Worth.).

Hay, O. P. 1902 A, 330.
Davidson, P. 1919 A, 435 (Geisacanthus).
Mississippian (Chester); Illinois.

Cosmacanthus elegans Evans.

Evans, H. M. 1904 A, 398, pl. xlvii.
Davidson, P. 1919 A, 434.
Eastman, C. R. 1905 A, 66 ("Asteracanthus").
Lower Triassic; Idaho.

Cosmacanthus humboldtensis Davidson.

Davidson, P. 1919 A, 433, figs. 1, 2.
Jordan and Hannibal 1923 A, 32, 61 (C. humboldtenis).
Middle Triassic; Nevada.

Cosmacanthus stellatus (St. John and Worth.).

Hay, O. P. 1902 A, 330.
Evans, H. M. 1904 A, 400.
Mississippian (St. Louis); Missouri.

CTENACANTHUS Agassiz. Type *C. major* Agassiz.

Hay, O. P. 1902 A, 326 (Ctenacanthus); 329 (Eunemacanthus).
Agassiz, L. 1835 B, 342.
1839 A, 597, pl. ii, fig. 10.
1844 C, 268.
Arldt, T. 1907 D, 339.
1923 A, 487.
Barkas, W. J. 1874 B, 168.
1874 D, 545.
Bronn, H. G. 1848 A, 355.
1849 A, 649.
Case, E. C. 1915 A, 124.
Claypole, E. W. 1903 A, 345.
Dean, B. 1902 A, 768.
1909 C, 229, 249, fig. 28 (Ctenacanthus, Ctenacanthidæ).
Eastman, C. R. 1901 A, 795.
1907 B, 75.
1908 A, 152.
1917 A, 261.
Egerton, P. G. 1853 C, 281, pl. xii.
Heilprin, A. 1887 A, 152, 300.
Hussakof, L. 1908 A, 43.
1911 A, 161.
Jordan, D. S. 1923 A, 95, 106.
Mantell, G. A. 1844 A, 611.
Miller, A. M. 1916 A, 72.
Moodie, R. L. 1926 A, 93, pl. vii.
Schlosser, M. 1917 A, 133.
Thomson, J. 1872 A, 66.
Trouessart, E. 1898 B, 7.
Twenhofel and Dunbar 1914 A, 160.
Woodward, A. S. 1915 B, lxix.
1921 B, 32, fig. 2.
1924 A, 112.
Zittel and Koken 1911 A, 53.
Zittel and Schlosser 1923 A, 59, fig. 94.

Ctenacanthus acutus Eastman.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Merrill, G. P. 1907 A, 8.
Mississippian (Keokuk); Iowa.

Ctenacanthus amblyxiphias Cope.

Hay, O. P. 1902 A, 327.
Beede, J. W. 1907 A, 120.
Branson, E. B. 1916 A, 654, pl. ii, fig. 25; text-fig. 5.
Case, E. C. 1915 A, 96.
Eastman, C. R. 1903 B, 186, pl. ii, figs. 22, 23.
Hussakof, L. 1908 A, 44.
1911 A, 161, pl. xxx, fig. 6.
Woodruff, E. G. 1906 A, 290, pl. xviii, fig. 5.
Pennsylvanian (Atchison) Nebraska: (Embar); Wyoming: Permian (Wichita, Clear Fork); Texas.

Ctenacanthus angulatus Newb. and Worth.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (Chester); Illinois.

Ctenacanthus angustus Newb.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1907 B, 18.
Hussakof, L. 1908 A, 44, fig. 19.
Upper Devonian (Berea); Ohio.

Ctenacanthus bellus Branson.

Branson, E. B. 1906 A, 1393, pl. xlii, figs. 19-21.
Mississippian (Salem); Indiana.

Ctenacanthus brevis.

Eastman, C. R. 1902 B, 77. (No description.)
Mississippian (Kinderhook); Iowa.

Ctenacanthus browni Branson.

Branson, E. B. 1916 A, 653, pl. iv, fig. 7; text-fig. 6.
Pennsylvanian (Embar); Wyoming.

Ctenacanthus? burlingtonensis St. John and Worth.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92 (This genus?).
1917 A, 262 (This genus?).
Mississippian (Burlington): Iowa, Illinois.

Ctenacanthus buttersi St. John and Worth.

Hay, O. P. 1902 A, 327.
Pennsylvanian; Illinois.

Ctenacanthus cannaliratus St. John and Worth.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (Chester); Illinois.

Ctenacanthus chemungensis Claypole.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1907 B, 21, 77, pl. vii, fig. 3.
1908 A, 154, 287.
Upper Devonian (Chemung); Pennsylvania, New York.

Ctenacanthus clarkii Newb.

Hay, O. P. 1902 A, 327.
Claypole, E. W. 1903 A, 319 (C. clarki).
Dean, B. 1909 C, 250, figs. 42-45 (C. clarki).
Eastman, C. R. 1902 B, 77 (C. clarki).
1907 B, 18 (C. clarki).
1908 A, 283 (C. clarki).
Hussakof, L. 1908 A, 45, fig. 19.
Upper Devonian (Cleveland); Ohio.

Ctenacanthus compressus Newb.

Hay, O. P. 1902 A, 327.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Hussakof, L. 1908 A, 45.
Upper Devonian (Cleveland); Ohio.

Ctenacanthus costatus Newb. and Worth.

Hay, O. P. 1902 A, 329 (Eunemacanthus).
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (St. Louis); Missouri.

Ctenacanthus coxianus St. John and Worth.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 87, 91.
1917 A, 262.
Mississippian (Kinderhook and Keokuk); Iowa.

Ctenacanthus cylindricus Newb.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Hussakof, L. 1908 A, 45.
Newberry, J. S. 1889 A, 202, pl. xxvi, fig. 1.
Mississippian (Keokuk); Kentucky.

Ctenacanthus decussatus Eastman.

Eastman, C. R. 1902 B, 84, 91, pl. vi, fig. 2; text-fig. 11.
Eastman, C. R. 1917 A, 261, 262.
Merrill, G. P. 1907 A, 8.
Mississippian (Kinderhook); Keokuk, Iowa.

Ctenacanthus deflexus St. John and Worth.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 77, 83, 92.
1917 A, 262.
Mississippian (St. Louis); Illinois.

Ctenacanthus depressus Newb.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 91
1917 A, 262.
Mississippian (Kinderhook); Iowa.

Ctenacanthus elegans Tuomey.

Hay, O. P. 1902 A, 327.
Mississippian; Alabama.

Ctenacanthus excavatus St. John and Worth.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (Keokuk); Illinois, Missouri.

Ctenacanthus? fallax Woodward.

Hay, O. P. 1902 A, 327.
Mississippian; ——.

Ctenacanthus formosus Newb.

Hay, O. P. 1902 A, 327.
Newberry, J. S. 1874 G, 94, 98.
1874 H, 212.
Read, M. C. 1873 A, 504 (Ctenocanthus formosa).
Rogers, A. F. 1924 A, 546.
Mississippian (Waverly); Ohio, Kentucky.

Ctenacanthus furcicarinatus Newb.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 87.
Newberry, J. S. 1874 G, 94.
Mississippian (Waverly); Kentucky.

Ctenacanthus gemmatus St. John and Worth.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (St. Louis); Illinois.

Ctenacanthus gracillimus Newb. and Worth.

Hay, O. P. 1902 A, 329 (Acondylacanthus).
Eastman, C. R. 1902 B, 85, 86, fig. 12.
1917 A, 261, pl. v, fig. 4; pl. vii, fig. 7
Hussakof, L. 1908 A, 43 (Acondylacanthus).
Strong, E. A. 1872 A, 2.
Mississippian (St. Louis); Missouri, Michigan, Illinois, Indiana.

Ctenacanthus gradocostus St. John and Worth.

Hay, O. P. 1902 A, 327 (C. gradocostatus. *errore*).
Eastman, C. R. 1902 B, 92.
1917 A, 262 (C. gradocostatus, *errore*).
Mississippian (Burlington); Illinois, Iowa.

Ctenacanthus gurleyi Newb.

Hay, O. P. 1902 A, 327.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (St. Louis); Indiana.

Ctenacanthus harrisoni St. John and Worth.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (St. Louis); Illinois.

Ctenacanthus keokuk St. John and Worth.

Hay, O. P. 1902 A, 328.
Branson, E. B. 1906 A, 1393.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (Keokuk); Illinois, Missouri.

Ctenacanthus littoni Newb.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Hussakof, L. 1908 A, 45.
Mississippian (St. Louis); Missouri.

Ctenacanthus longinodosus Eastman.

Eastman, C. R. 1902 B, 78, 91, pl. v, fig. 2; text-fig. 8.
Eastman, C. R. 1917 A, 261, 262.
Merrill, G. P. 1907 A, 8.
Mississippian (Kinderhook); Iowa.

Ctenacanthus lucasi Eastman.

Eastman, C. R. 1902 B, 80, 91, pl. vi, fig. 1; text-fig. 9.
Eastman, C. R. 1917 A, 261, 262.
Merrill, G. P. 1907 A, 8.
Mississippian (Kinderhook); Iowa.

Ctenacanthus marshi Newb.

Newberry, J. S. 1873 A, 326, pl. xxxvi, figs. 3, 3b.
Hay, O. P. 1902 A, 328.
Stevenson, J. J. 1907 A, 168 (Ctenobranchus).
Pennsylvanian; Illinois.

Ctenacanthus mayi Newb. and Worth.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 91.
Mississippian (Burlington); Iowa.

Ctenacanthus nodocostatus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 159, pl. li, fig. 1.
Devonian (Hamilton, Catskill); New York, Pennsylvania.

Ctenacanthus obscuracostatus Branson.

Branson, E. B. 1916 A, 654, pl. iv, fig. 2; text-figs. 2, 3.
Pennsylvanian (Embar); Wyoming.

Ctenacanthus pellensis St. John and Worth.

Hay, O. P. 1902 A, 328.
Branson, E. B. 1906 A, 1393, pl. xli, fig. 25 (This species?).
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (St. Louis); Iowa: (Salem); Indiana.

Ctenacanthus pugiunculus St. John and Worth.

Hay, O. P. 1902 A, 328.
Mississippian (St. Louis); Missouri, Illinois.

Ctenacanthus randalli Newb.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1907 B, 21, 77.
1908 A, 154, 287.
Hussakof, L. 1908 A, 46, fig. 20.
Upper Devonian (Chemung); Pennsylvania.

Ctenacanthus sculptus St. John and Worth.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (Kinderhook); Iowa.

Ctenacanthus semicostatus (St. John and Worth.).

Hay, O. P. 1902 A, 328 (Anaclitacanthus).
Eastman, C. R. 1902 B, 89, 92.
1917 A, 262.
Mississippian (Burlington, Kinderhook); Iowa.

Ctenacanthus similis St. John and Worth.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 92.
1917 A, 262.
Mississippian (Chester); Illinois.

Ctenacanthus solidus Eastman.

Eastman, C. R. 1902 B, 77, 83, 87, 90, 92, pl. vii, fig. 3; text-fig. 13.
Eastman, C. R. 1917 A, 261, 262.
Merrill, G. P. 1907 A, 8, 9.
Mississippian (Kinderhook); Iowa, Illinois.

Ctenacanthus speciosus St. John and Worth.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 89.
Mississippian (Kinderhook); Iowa.

Ctenacanthus spectabilis St. John and Worth.

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 77, 83, 87, 90, 92, pl. v, fig. 1.
1917 A, 261, 262.
Merrill, G. P. 1907 A, 9.
Mississippian (Kinderhook); Iowa, Illinois.

Ctenacanthus triangularis Newb.

Hay, O. P. 1902 A, 328.
Carll, John F. 1880 A, 33.
Newberry, J. S. 1874 G, 90, 98.
Mississippian (Waverly); Pennsylvania.

Ctenacanthus varians St. John and Worth.

St. John and Worthen 1875 A, 422, pl. xiv, fig. 2.
Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 77, 83, 88, 89, 91, 92.
1917 A, 262.
Hay, O. P. 1909 C, 51, pl. xiii, figs. 4, 5.
Mississippian (Kinderhook); Iowa.

Ctenacanthus venustus Eastman.

Eastman, C. R. 1902 B, 81, 92, pl. iii, fig. 2; text-fig. 10.
Eastman, C. R. 1917 A, 261, 262.
Merrill, G. P. 1907 A, 9.
Mississippian (Kinderhook); Iowa.

Ctenacanthus vetustus Newb.

Hay, O. P. 1902 A, 328.
Claypole, E. W. 1903 A, 318.
Eastman, C. R. 1907 B, 18.
1908 A, 283.

Hussakof, L. 1908 A, 46.
Newberry, J. S. 1874 G, 94.
1874 H, 215.
Upper Devonian (Cleveland); Ohio.

Ctenacanthus wrighti Newb.

Hay, O. P. 1902 A, 328.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1902 B, 71.
1907 B, 14, 76.
1908 A, 153, 276.
Hussakof, L. 1908 A, 46.
Hussakof and Bryant 1919 A, 15, 17, 161, pl. lii, fig. 2.
Middle Devonian (Hamilton): Upper Devonian (Genesee); New York.

Ctenacanthus xiphias (St. John and Worth.).

Hay, O. P. 1902 A, 328.
Eastman, C. R. 1902 B, 77 (Acondylacanthus); 92 (Ctenacanthus).
1917 A, 262.
Merrill, G. P. 1907 A, 9.
Trouessart, E. 1898 B, 7.
Mississippian (Keokuk); Iowa.

Ctenacanthus sp. indet.

Eastman, C. R. 1902 B, 83. Mississippian (Keokuk); Iowa.
Hussakof and Bryant 1919 A, 15, 161. Upper Devonian (Genesee); New York.
Twenhofel and Dunbar 1914 A, 160. Pennsylvanian; Kansas.

CYRTACANTHUS Newb. Type *C. dentatus* Newb.

Hay, O. P. 1902 A, 336.
Claypole, E. W. 1903 A, 345.
Eastman, C. R. 1908 A, 119.
1908 B, 193.
Hussakof and Bryant 1919 A, 163.
Jordan, D. S. 1919 B, 371 (Syn.? of Erismacanthus).
1923 A, 107.
Weller, S. 1902 A, 427.

Cyrtacanthus dentatus Newb.

Hay, O. P. 1902 A, 336.
Claypole, E. W. 1903 A, 318.
Eastman, C. R. 1907 B, 13.
1908 A, 149, 278.
Hussakof, L. 1908 A, 46.
Hussakof and Bryant 1919 A, 162, text-fig. 55 *a* (This species?).
Orton, E. 1878 A, 626.
Stauffer, C. R. 1909 A, 169.
Middle Devonian (Columbus and Delaware?); Ohio.

ECZEMATOLEPIS S. A. Miller. Type *Acantholepis pustulosus* (Newb.).

Hay, O. P. 1902 A, 332 (Eczematolepis, Phlyctænacanthus).
Arldt, T. 1907 D, 130, 185 (Acantholepis).
Claypole, E. W. 1903 A, 313 (Acantholepis).
Cleland, H. F. 1911 A, 152 (Phlyctænacanthus).
Dean, B. 1906 B, 136 (Phlyctænacanthus).
Eastman, C. R. 1903 B, 214 (Phlyctænacanthus).
1907 B, 79, 225 (Acantholepis); 80 (Phlyctænacanthus).
1908 A, 140 (Acantholepis); 141, 143 (Phlyctænacanthus).
1908 B, 78, 193 (Acantholepis).
Hussakof, L. 1908 C, 312 (Acantholepis).
Jordan, D. S. 1923 A, 97 (Eczematolepis, Phlyctænacanthus).
Teller, E. F. 1906 A, 162 (Phlyctænacanthus).
Weller, S. 1902 A, 427 (Acantholepis).

Eczematolepis fragilis (Newb.).

Hay, O. P. 1902 A, 332.
Claypole, E. W. 1896 B, 354 (Acantholepis).
1903 A, 321 (Acantholepis). 318 (Oracanthus abbreviatus, O. fragilis, O. granulatus).
Cleland, H. F. 1911 A, 152, pl. xlv, fig. 3 (Acantholepis).
Eastman, C. R. 1907 B, 14, 15, 79, 225, pl. iii, fig. 1 (Acantholepis).
1908 A, 142, 277, pl. iii, fig. 5 (Acantholepis).
1908 B, 79, pl. iii, fig. 1 (Acantholepis).
Hussakof, L. 1908 A, 22, fig. 1.
Hussakof and Bryant 1919 A, 10, 13, 17, 101, pl. xxix, fig. 2, pl. xxx, fig. 1.
Newberry, J. S. 1874 H, 192 (Acantholepis pustulosus).
Orton, E. 1878 A, 626 (Acantholepis pustulosus).
Stauffer, C. R. 1909 A, 169 (Acantholepis).
Middle Devonian (Columbus, Delaware); Ohio: (Ulsterian); New York: (Erian); Wisconsin: Upper Devonian (Genesee); New York.

Eczematolepis telleri Eastman.

Hay, O. P. 1902 A, 332 (Phlyctænaspis).
Cleland, H. F. 1911 A, 153, pls. li, lii, fig. 1 (Phlyctænaspis).
Eastman, C. R. 1907 B, 15, 80 (Phlyctænaspis).
1908 A, 143, 277 (Phlyctænaspis).
Hussakof and Bryant 1919 A, 102.
Sauvage, H. E. 1899 A, 6 (Phlyctænaspis telluri).
Teller, E. E. 1906 A, 162, pls. i-v (Phlyctænaspis).
1911 A, 271.
Middle Devonian (Hamilton); Wisconsin.

ERISMACANTHUS M'Coy. Type *E. jonesii* M'Coy.

Hay, O. P. 1902 A, 335.
Barkas, W. J. 1874 D, 546.
Eastman, C. R. 1902 E, 849.
1903 B, 211.
1917 A, 265.
Hussakof and Bryant 1919 A, 163.
Jordan, D. S. 1923 A, 106.

Erismacanthus barbatus Eastman.

Eastman, C. R. 1903 B, 211, pl. v, fig. 47.
1908 A, 149.
Mississippian (Kinderhook); Iowa.

Erismacanthus formosus Eastman.

Eastman, C. R. 1902 E, 850, fig. 1.
1903 B, 212, fig. 13.
1917 A, 265.
Mississippian (St. Louis); Missouri.

Erismacanthus maccoyanus St. John and Worth.

Hay, O. P. 1902 A, 335.
Davis, J. W. 1884 A, 617.
Eastman, C. R. 1903 B, 211.
1917 A, 265, pl. vii, figs. 2, 3.
Mississippian (Kinderhook); Iowa: (St. Louis); Missouri.

EUCTENIUS Traquair. Type *E. unilateralis* (Barkas).

Hay, O. P. 1902 A, 337.
Jordan, D. S. 1923 A, 96, 107.

Euctenius sp. indet.

Hay, O. P. 1902 A, 337. Pennsylvanian; Ohio.

EUNEMACANTHUS St. John and Worth. Type *E. costatus* (Newb. and Worth.).

Hay, O. P. 1902 A, 329.
Jordan, D. S. 1920 C, 425 (Syn. of Ctenacanthus).
1923 A, 96.

Eunemacanthus costatus (Newb. and Worth.).

Hay, O. P. 1902 A, 329.
Eastman, C. R. 1902 B, 77.
Pennsylvanian (St. Louis); Illinois, Missouri.

Eunemacanthus keytei Branson.

Branson, E. B. 1916 A, 655, pl. iv, fig. 1; text-fig. 1.
Pennsylvanian (Embar); Wyoming.

GAMPHACANTHUS S. A. Miller. Type *Heteracanthus politus* Newb.

Hay, O. P. 1902 A, 332.
Dean, B. 1906 B, 136 (Heteracanthus).
Eastman, C. R. 1907 B, 82, 229 (Heteracanthus).
1908 A, 138 (Syn. of Heteracanthus).
1917 A, 244 (Heteracanthus).
Hussakof and Bryant 1919 A, 163.
Jordan, D. S. 1923 A, 93.
Osburn, R. C. 1907 A, 432 (Heteracanthus).
Zittel and Schlosser 1923 A, 78, fig. 134.

Gamphacanthus politus (Newb.).

Hay, O. P. 1902 A, 332.
Cleland, H. F. 1911 A, 153, pl. xlvii, figs. 1, 2 (Heteracanthus).
Eastman, C. R. 1907 B, 15, 16, 82, 229 (Heteracanthus).
1908 A, 138, 277, 281 (Heteracanthus).
Hussakof, L. 1908 A, 47.
Hussakof and Bryant 1919 A, 164.
Norton, W. H. 1906 A, 356 (Heteracanthus).
Teller, E. E. 1906 A, 164 (Heteracanthus).
1911 A, 270.
Middle Devonian (Hamilton, Cedar Valley); Iowa, Illinois, Wisconsin.

Gamphacanthus uddeni (Lindahl).

Hay, O. P. 1902 A, 332.
Anonymous, 1898 C, 85 (Heteracanthus).
Cleland, H. F. 1911 A, 154 (Heteracanthus).
Eastman, C. R. 1907 B, 15, 16, 83 (Heteracanthus).
1908 A, 139, 277 (Heteracanthus).
1917 A, 245, pl. i (Heteracanthus).
Hussakof and Bryant 1919 A, 164, pl. lii, fig. 1.
Udden, J. A. 1897 A, 95 (Heteracanthus).
Middle Devonian (Cedar Valley); Iowa: (Hamilton); Wisconsin.

GAMPSACANTHUS St. John and Worth. Type *G. typus* St. John and Worth.

Hay, O. P. 1902 A, 336.
Eastman, C. R. 1902 E, 849.
1917 A, 265.
Jordan, D. S. 1923 A, 106.

Gampsacanthus? latus St. John and Worth.

Hay, O. P. 1902 A, 336.
Mississippian (Keokuk); Missouri.

Gampsacanthus squamosus St. John and Worth.

Hay, O. P. 1902 A, 336.
Mississippian (St. Louis); Illinois.

Gampsacanthus typus St. John and Worth.

Hay, O. P. 1902 A, 336.
Zittel and Woodward 1902 A, 49.
Mississippian (St. Louis); Illinois, Missouri.

GLYMMATACANTHUS St. John and Worth. Type *G. irishii* St. J. and Worth.

Hay, O. P. 1902 A, 331.
Evans, H. M. 1904 A, 400.
Jordan, D. S. 1920 C, 425 (Gymnatacanthus).
1923 A, 96.

Glymmatacanthus irishii St. John and Worth.

Hay, O. P. 1902 A, 331.
Mississippian (Kinderhook); Iowa.

Glymmatacanthus petrodoides St. John and Worth.

Hay, O. P. 1902 A, 331.
Mississippian (Chester); Illinois.

Glymmatacanthus rudis St. John and Worth.

Hay, O. P. 1902 A, 331.
Mississippian (Keokuk); Iowa.

HARPACANTHUS Traquair. Type *Tristychius fimbriatus* (Stock).

Hay, O. P. 1902 A, 336.
Bronn, H. G. 1849 A, 653 (Tristychius).
Eastman, C. R. 1908 A, 119, 150.
1917 A, 266.
Jordan, D. S. 1923 A, 106.
Traquair, R. H. 1893 E, 178.
1894 B, 372.
Woodward, A. S. 1924 A, 112 (Tristychius).
Zittel and Koken 1911 A, 54 (Tristychius).
Zittel and Schlosser 1923 A, 59, fig. 95 (Trystichus).

Harpacanthus fimbriatus (Stock).

Hay, O. P. 1902 A, 336.
Hussakof, L. 1908 A, 48.
Mississippian (St. Louis); Illinois.

Harpacanthus procumbens Eastman.

Eastman, C. R. 1917 A, 266, pl. vii, fig. 1.
Mississippian (St. Louis); Missouri.

HOMACANTHUS Agassiz. Type *H. arcuatus* Agassiz.

Hay, O. P. 1902 A, 329.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 546.
Eastman, C. R. 1903 B, 217.
1907 B, 74.
1908 A, 151.
Jordan, D. S. 1923 A, 91.

Homacanthus acinaciformis Eastman.

Eastman, C. R. 1903 B, 218, pl. v, fig. 58.
Eastman, C. R. 1907 B, 21, 75, pl. i, fig. 16.
1908 A, 151, 287, pl. iii, fig. 10.
Upper Devonian (Chemung); Pennsylvania.

Homacanthus delicatulus Eastman.

Eastman, C. R. 1903 B, 218, pl. iii, fig. 28, pl. v, fig. 59.
Eastman, C. R. 1908 A, 152.
Mississippian (Kinderhook); Iowa.

Homacanthus gracilis Whiteaves.

Hay, O. P. 1902 A, 329.
Eastman, C. R. 1907 B, 13.
1908 A, 276.
Lambe, L. M. 1904 C, 33 ("acanthodian fish").
Whiteaves, J. F. 1907 B, 258 ("acanthodian?").
Lower Devonian; New Brunswick.

HOPLONCHUS J. W. Davis. Type *H. elegans* J. W. Davis.

Hay, O. P. 1902 A, 329.
Cushing, H. P. 1912 A, 581.
Jordan, D. S. 1923 A, 96.

Hoplonchus parvulus Newb.

Hay, O. P. 1902 A, 329.

Claypole, E. W. 1903 A, 318 (Ctenacanthus).
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Hussakof, L. 1908 A, 49.
Upper Devonian (Cleveland); Ohio.

LECRACANTHUS St. John and Worth. Type *L. unguiculus* St. John and Worth.

Hay, O. P. 1902 A, 336.
Eastman, C. R. 1902 E, 849.
1917 A, 265.
Jordan, D. S. 1923 A, 106.

Lecracanthus unguiculus St. John and Worth.

Hay, O. P. 1902 A, 336.
Mississippian (St. Louis); Missouri, Illinois.

LISTRACANTHUS Newb. and Worth. Type *L. hystrix* Newb. and Worth.

Hay, O. P. 1902 A, 336.
Barkas, W. J. 1874 D, 547.
Bolton, H. 1896 A, 424, fig.
Jordan, D. S. 1923 A, 107.
Woodward, A. S. 1903 A, 486.

Listracanthus hildrethi Newb.

Hay, O. P. 1902 A, 336.
Pennsylvanian; Ohio.

Listracanthus hystrix Newb. and Worth.

Hay, O. P. 1902 A, 336.
Brongniart, C. 1888 C, 47.
Savage, T. E. 1922 A, 238, 240.
Pennsylvanian; Ohio, Illinois, Missouri.

MACHÆRACANTHUS Newb. Type *M. peracutus* Newb.

Hay, O. P. 1902 A, 331.
Barkas, W. J. 1874 D, 547 (Machæracanthus).
Claypole, E. W. 1903 A, 313.
Eastman, C. R. 1899 A, 642.
1902 B, 92.
1902 G, 536.
1907 B, 83, 193, 231.
1908 A, 112, 113.
Hussakof and Bryant 1919 A, 140, 143.
Jordan, D. S. 1923 A, 91.
Reis, O. M. 1894 A, 58, 60.
Smith, B. 1910 A, 656; fig. 1.
Traquair, R. H. 1893 E, 177.
Weller, S. 1902 A, 427.
Zittel and Koken. 1911 A, 72.

Machæracanthus longævus Eastman.

Eastman, C. R. 1907 B, 14, 85; pl. ii, fig. 8.
Cleland, H. F. 1911 A, 154 (This species?).
Eastman, C. R. 1907 A, 114, 231, 278.
Hussakof and Bryant 1919 A, 17, 166.
Smith, B. 1910 A, 658.
Middle Devonian (Hamilton); New York, Wisconsin?

Machæracanthus major Newb.

Hay, O. P. 1902 A, 331.
Claypole, E. W. 1903 A, 318, 345.
Eastman, C. R. 1907 B, 14.
1908 A, 278.
Hussakof, L. 1908 A, 49.
Hussakof and Bryant 10, 165, pl. liii, figs. 1, 2; text-fig. 56.
Newberry, J. S. 1874 H, 192.
Orton, E. 1878 A, 626.
Smith, B. 1910 A, 658.
Stauffer, C. R. 1909 A, 169.
Zittel and Woodward 1902 A, 49, fig. 97.
Middle Devonian (Columbus and Delaware), Ohio: (Hamilton); New York: Upper Devonian (Genesee); New York.

Machæracanthus peracutus Newb.

Hay, O. P. 1902 A, 332.
Clarke and Luther 1904 A, 42.
Claypole, E. W. 1903 A, 318.
Eastman, C. R. 1907 B, 14, 84.
1908 A, 114, 277.
Hussakof, L. 1908 A, 49.
Hussakof and Bryant 1919 A, 17, 167, pl. liii, fig. 3.
Lambe, L. M. 1904 C, 16, 34, 42.
Newberry, J. S. 1874 H, 192.
Orton, E. 1878 A, 626.
Rogers, A. F. 1924 A, 546.
Smith, B. 1910 A, 658.
Stauffer, C. R. 1909 A, 169.
Whiteaves, J. F. 1877 A, 319.
Lower Devonian; Quebec: Middle Devonian; Ontario: (Columbus and Delaware); Ohio: (Onondaga), New York.

Machæracanthus sulcatus Newb.

Hay, O. P. 1902 A, 332.
Clarke and Luther 1904 A, 42.
Clarke and Ruedemann 1903 A, 767.
Claypole, E. W. 1903 A, 318.
Eastman, C. R. 1907 B, 13, 14, 84, 191, 231; pl. iii, fig. 6.
1908 A, 276, 278.
Lambe, L. M. 1904 C, 16, 34, 42.
Lankester, E. R. 1870 D, 223.
Newberry, J. S. 1874 H, 192.
Orton, E. 1878 A, 626.
Smith, B. 1910 A, 658.
Stauffer, C. R. 1909 A, 169.
Van Ingen and Clark 1903 A, 1204, 1208.
Whiteaves, J. F. 1877 A, 319.
Lower Devonian; Quebec, Ontario: Middle Devonian (Columbus and Delaware); Ohio and Canada: (Onondaga and Oriskany); New York.

Machæracanthus sp. indet.

Eastman, C. R. 1899 A, 642. Middle Devonian (Hamilton); New York.
1907 B, 15 (=M. longaevus?). Middle Devonian (Hamilton); Wisconsin.
Hussakof and Bryant 1919 A, 168, pl. liii, fig. 4. Upper Devonian (Genesee); New York.

MARRACANTHUS St. John and Worth. Type *M. rectus* (Newb. and Worth).

Hay, O. P. 1902 A, 329.
Jordan, D. S. 1923 A, 96.

Marracanthus rectus (Newb. and Worth.).

Hay, O. P. 1902 A, 329.
Mississippian (St. Louis); Missouri.

ŒSTOPHORUS S. A. Miller. Type *Sphenophorus lilleyi* Newb.

Hay, O. P. 1902 A, 337.
Jordan, D. S. 1923 A, 96.
Zittel and Schlosser 1923 A, 31 (Sphenophorus).

Œstophorus lilleyi (Newb.).

Hay, O. P. 1908 A, 337.
Claypole, E. W. 1903 A, 320 (Sphenophorus silleyi).
Eastman, C. R. 1907 B, 21 (Sphenophorus).
1908 A, 207, 288 (Sphenophorus).
1908 B, 157 (Sphenophorus).
Hussakof, L. 1908 A, 23.
Hussakof and Bryant 1919 A, 13, 17, 105, pl. xxxiii, fig. 1 (This species?).
Middle Devonian (Hamilton); Wisconsin: Upper Devonian (Chemung); Pennsylvania: (Genesee); New York.

Œstophorus sp. indet.

Hay, O. P. 1902 A, 338.
Cleland, H. F. 1911 A, 157. Devonian (Hamilton); Wisconsin.

Eastman, C. R. 1907 B, 16 (Sphenophorus). Devonian (Hamilton); Wisconsin.
1908 A, 279 (Sphenophorus).
Teller, E. E. 1911 A, 271 (Sphenophorus). Devonian (Hamilton); Wisconsin.

Onchus Agassiz. Type *O. murchisoni* Agassiz.

Hay, O. P. 1902 A, 326.
Agassiz, L. 1835 B, 342.
1839 A, 596, pl. ii, figs. 10, 11.
1839 B, 607, pl. iv, figs. 9-11, 57-59.
1844 C, 268.
Arldt, T. 1923 A, 487.
Barkas, W. J. 1874 D, 547.
Barrell, J. 1915 B, 394, 404.
Bronn, H. G. 1848 B, 843.
1849 A, 652.
Claypole, E. W. 1885 E, 89.
1900 A, 248.
1903 A, 345.
Eastman, C. R. 1907 B, 73.
1908 A, 150.
Hay, O. P. 1901 B, 63.
Heilprin, A. 1887 A, 142, 300.
Jordan, D. S. 1923 A, 92 (To Onchidæ).
Kemna, A. 1903 A, 343.
Lankester, E. R. 1864 C, 446.
Mantell, G. A. 1844 A, 611.
M'Coy, F. 1853 C, 12.
Moodie, R. L. 1923 B, 297.
Murchison, R. I. 1853 A, 16.
1854 A, 238, pl. xxxv, figs. 15-17.
Pompeckj, J. F. 1913 A, 1120.
Schlosser, M. 1917 A, 132.
Stromer, E. 1920 A, 11.
Traquair, R. H. 1899 C, 598.
1900 C, 503.
Woodward, A. S. 1920 D, 27.
Zittel and Koken 1911 A, 72.
Zittel and Schlosser 1923 A, 48, 78, figs. 62, 133.

Onchus clintoni Claypole.

Hay, O. P. 1902 A, 326.
Claypole, E. W. 1885 E, 90.
Dana, J. D. 1896 A, 550.
Eastman, C. R. 1907 B, 12.
Twenhofel, W. H. 1913 A, 303.
Middle Silurian (Clinton); Pennsylvania.

Onchus murchisoni Agassiz.

Agassiz, L. 1843 B (1837), iii, 6, pl. i, fig. 1.
1839 A, 607? pl. iv, figs. 9, 11.
Ami, H. M. 1901 B, 309, 312.
M'Coy, F. 1853 C, 13.
Murchison, R. I. 1853 A, 16.
Woodward, A. S. 1891 A, 94.
1901 C, 312.
1902 D, 203.
Lower Devonian (Knoydart); Nova Scotia.

Onchus pennsylvanicus Claypole.

Hay, O. P. 1902 A, 326.
Claypole, E. W. 1885 E, 90.
Eastman, C. R. 1907 B, 12.
Upper Silurian (Salina); Pennsylvania.

Onchus rectus Eastman.

Hay, O. P. 1902 A, 326.
Clark and Ruedemann 1903 A, 767.
Eastman, C. R. 1907 B, 22, 74; fig. 16.
1908 A, 150, 289, pl. iii, fig. 9.
Hussakof and Bryant 1919 A, 168.
Upper Devonian (Chemung, Catskill); New York.

Onchus sp. indet.

Eastman, C. R. 1907 B, 12. Silurian (Niagara); Maryland.
1908 A, 276. Middle Devonian; Quebec.

Physonemus M'Coy. Type *P. arcuatus* M'Coy.

Hay, O. P. 1902 A, 333 (Physonemus, Xystracanthus).
Barkas, W. J. 1874 D, 546 (Drepanacanthus); 547 (Physonemus); 548 (Xystracanthus).
Bronn, H. G. 1849 A, 653.
Eastman, C. R. 1902 B, 86, 87; text-fig. 12.
1902 E, 849.
1903 B, 171, 183, 205 (Physonemus, Xystracanthus).
1917 A, 257, 262 (Xystracanthus, Drepanacanthus as syns.).
Hussakof and Bryant 1919 A, 164.
Jordan, D. S. 1919 B, 407.
1923 A, 95, 106 (Physonemus); 106 (Xystracanthus).
Zittel and Koken 1911 A, 63 (Xystracanthus).

Physonemus acinaciformis (St. John and Worth.).

Hay, O. P. 1902 A, 333 (Xystracanthus).
Eastman, C. R. 1903 B, 206, 210.
1917 A, 263.
Pennsylvanian: Illinois.

Physonemus anceps (Newb. and Worth.).

Hay, O. P. 1902 A, 334 (Xystracanthus).
Eastman, C. R. 1903 B, 206 (Drepanacanthus); 210 (Physonemus).
1917 A, 263.
Pennsylvanian; Illinois.

Physonemus arcuatus M'Coy.

M'Coy, F. 1848 A, 117.
Davis, J. W. 1883 A, 367, pl. xlvii, fig. 8.
Eastman, C. R. 1903 B, 208, 210, fig. 12.
1917 A, 263, 264, pl. v, figs, 1, 2.
M'Coy, F. 1855 A, 638, pl. 31, fig. 20.
Woodward, A. S. 1891 A, 130.
This species is not to be confounded with Leidy's *Xystracanthus arcuatus*, now renamed *Physonemus asper* Eastman.
Lower Carboniferous; England, Ireland: Mississippian (St. Louis); Missouri, Illinois, Indiana.

Physonemus asper Eastman.

Eastman, C. R. 1903 B, 183, 210 (To replace *Xystracanthus arcuatus* Leidy, preoccupied).
1917 A, 263.
Hay, O. P. 1902 A, 334 (Xystracanthus arcuatus).
Pennsylvanian; Kansas, Illinois.

Physonemus carinatus St. John and Worth.

Hay, O. P. 1902 A, 333.
Mississippian (Kinderhook); Illinois.

Physonemus chesterensis St. John and Worth.

Hay, O. P. 1902 A, 333.
Mississippian (Chester); Illinois.

Physonemus falcatus St. John and Worth.

Hay, O. P. 1902 A, 333.
Mississippian (St. Louis); Missouri.

Physonemus gemmatus (Newb. and Worth.).

Hay, O. P. 1902 A, 334 (Xystracanthus).
Eastman, C. R. 1903 B, 203, 209, 210.
1917 A, 263, pls. iii, iv; pl. v, fig. 3.
Mississippian (Keokuk); Iowa.

Physonemus gigas Newb. and Worth.

Hay, O. P. 1902 A, 333.
Eastman, C. R. 1902 E, 850.
1903 B, 206, 210, 213.
1917 A, 263.
Mississippian (Burlington); Illinois.

Physonemus hamus-piscatorius Eastman.

Eastman, C. R. 1903 B, 207, 210, pl. v, figs. 45, 46.
Eastman, C. R. 1908 A, 149.
1917 A, 263.
Mississippian (Kinderhook); Iowa.

Physonemus mirabilis (St. John and Worth.).

Hay, O. P. 1902 A, 334 (Xystracanthus).
Eastman, C. R. 1917 A, 263.
Karpinsky, A. P. 1925 A, 135, fig. 15 (Xystracanthus).
Pennsylvanian; Illinois.

Physonemus pandatus Eastman.

Eastman, C. R. 1903 B, 207, 210, pl. v, fig. 44.
Eastman, C. R. 1908 A, 149.
1917 A, 263.
Mississippian (Kinderhook); Iowa.

Physonemus parvulus St. John and Worth.

Hay, O. P. 1902 A, 333.
Mississippian (Keokuk); Missouri, Illinois.

Physonemus proclivus St. John and Worth.

Hay, O. P. 1902 A, 333.
Davis, J. W. 1884 A, 618.
Mississippian (Kinderhook); Iowa.

Physonemus reversus (St. John and Worth.).

Hay, O. P. 1902 A, 334 (Xystracanthus).
Eastman, C. R. 1903 B, 206 (Drepanacanthus).
Mississippian (St. Louis); Illinois, Missouri.

Physonemus stellatus Newb.

Hay, O. P. 1902 A, 333.
Eastman, C. R. 1903 B, 206, 209, 210.
1917 A, 263.
Hussakof, L. 1908 A, 49, fig. 21 (Oracanthus).
Mississippian (Keokuk); Illinois, Iowa: (St. Louis); Indiana.

PROSPIRAXIS Williams. Type *Spiraxis major* Newb.

Hay, O. P. 1902 A, 338.
Jordan, D. S. 1923 A, 96.

Prospiraxis major (Newb.).

Hay, O. P. 1902 A, 338.
Upper Devonian (Chemung); New York.

Prospiraxis randallii (Newb.).

Hay, O. P. 1902 A, 338.
Upper Devonian (Chemung); Pennsylvania.

STETHACANTHUS Newb. Type *S. altonensis* (St. John and Worth).

Hay, O. P. 1902 A, 333.
Clark, W. 1898 A, 46.
Eastman, C. R. 1902 E, 850.
1903 B, 213.
1917 A, 263, 266.
Hussakof and Bryant 1919 A, 164.
Jordan, D. S. 1920 B, 447.
1923 A, 93, 106.

Stethacanthus altonensis (St. John and Worth.).

Hay, O. P. 1902 A, 333.
Eastman, C. R. 1903 B, 214.
Hussakof, L. 1908 A, 50.
Mississippian (St. Louis); Illinois, Missouri.

Stethacanthus compressus Newb.

Hay, O. P. 1902 A, 333.
Mississippian (Burlington); Iowa.

Stethacanthus depressus (St. John and Worth.).

Hay, O. P. 1902 A, 333 (Physonemus).
Eastman, C. R. 1903 B, 216, fig. 15 (Incorrectly referred, *fide* Hussakof and Bryant).

Hussakof, L. 1913 A, 249.
Hussakof and Bryant 1919 A, 170, pl. liv, fig. 3.
Upper Devonian (Catskill); Pennsylvania: Mississippian (Kinderhook); Iowa: (Waverly); Michigan.

Stethacanthus erectus Eastman.

Eastman, C. R. 1903 B, 217, pl. iii, fig. 29.
Hussakof, L. 1913 A, 249.
Mississippian (Kinderhook); Iowa.

Stethacanthus exilis Hussakof.

Hussakof, L. 1913 A, 249, pl. xlvii, fig. 3.
Eastman, C. R. 1917 A, 266.
Mississippian (Waverly); Kentucky.

Stethacanthus humilis Hussakof.

Hussakof, L. 1913 A, 248, pl. xlvii, figs. 1, 2.
Eastman, C. R. 1903 B, 217, pl. iii, fig. 29 (S. depressus).
1917 A, 266.
Hussakof, L. 1913 A, 249, foot-note.
Mississippian (Waverly); Kentucky.

Stethacanthus præcursor Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 169, pl. liv, figs. 1, 2.
Upper Devonian (Genesee); New York.

Stethancanthus productus Newb.

Hay, O. P. 1902 A, 333 (S. productus, S. compressus).
Eastman, C. R. 1903 B, 215, fig. 14 (S. compressus a syn.).
1917 A, 266.
Mississippian (Burlington, Keokuk); Iowa.

Stethacanthus tumidus Newb.

Hay, O. P. 1902 A, 333.
Hussakof, L. 1908 A, 50.
Mississippian (Cuyahoga); Ohio.

Stethacanthus sp. indet.

Eastman, C. R. 1899 A, 642. Mississippian (Keokuk); Iowa.

Class OSTEICHTHYES.

Unless otherwise indicated the writers, as cited, include this group under the term *Pisces*.

Hay, O. P. 1902 A, 338.
Abel, O. 1912 F, 300, 672.
1914 C, 344 ("fische").
1920 A, 333 (Teleostomi).
1921 A, 144, 207, 247 ("fische").
1922 F.
Adams, C. C. 1902 A, 116 ("fish").
Adams, L. A. 1919 A, 62.
Adloff, P. 1904 B, 54 ("fische").
1907 A, 532 ("fische").
Agassiz, A. 1840 C, 97 ("poissons").
1859 A, 108 ("fishes").
1877 A, 117 ("bony fishes").
Agassiz, L. 1836 B, 24 ("poissons").
1840 A, 58 ("poissons").
1840 B, 62 ("poissons").
1844 C, 251 ("poissons").
1844 D, 132 ("fishes").
1858 A, 9 ("fishes").
Ahlborn, F. 1896 B, 1 ("fische").
Aichel, O. 1919 A ("fische").
Allis, E. P. 1919 B, 73.
Anonymous, 1821 A, 272 ("fische").
Alessandrini, A. 1849 A, 371.
Alix, E. 1874 B, 20 ("poissons osseux").
Allen, J. A. 1905 A, 662 ("fishes").
Allis, E. P. 1898 A, 457 ("fishes").
1905 A, 401 ("fishes").
1918 A, 241 ("fishes").
1919 A, 350 ("fishes").
Anthony, R. 1912 A ("poissons").
Arldt, T. 1907 D, 674.
Baraldi, G. 1877 A, *passim* ("pesci").
Bardeleben, K. 1901 A.
1907 A, 35 ("fische").
1907 B, 154 ("fische").
Barkas, W. J. 1874 D, 542 ("fishes").
Barrell, J. 1915 B, 392 ("fishes").
Baur, G. 1885 L ("vertebrates" in part).
Baur, G. 1893 D, 116 ("fische").
1896 F ("osseous fishes").
Bender, O. 1907 A, 39 ("fische").
Berry, E. W. 1925 A, 355 ("fishes").
Beyer, H. 1909 A, 32 ("fische").
Bittner, F. 1912 A, 1 ("fische").
Blainville, H. M. D. 1817 A, 104 ("poissons").
Bojanus, L. H. 1818 A, 498 ("fische").
1818 B, 2095 ("fische").
1821 A, 1157 ("fische").
Bonaparte, C. L. 1831 A, 89 (Ossei).
1832 A, 319.
1833 B, 1197 (Ossei).
Born, G. 1827 A, 182 ("fische").
Boulenger, G. A. 1917 B, 327 ("poissons").
Brandt, J. F. 1865 A, 21.
Bronn, H. G. 1849 A, 780, seq.
Broom, R. 1908 E, 114 ("bony fishes").
Bruch, C. 1862 A, 78 ("fische").
Burckhardt, R. 1903 A, 78 ("fische").
1906 A, 156 ("fische").
Cahall, W. C. 1890 A, 232 ("fishes").
Carus, V. 1875 A, 486.
Carus and Engelmann 1861 A, 968-997, 1551-1562, 1669-1676, 1788.
Chaine, J. 1918 A, 733 ("poissons").
Chamberlin, T. C. 1900 A, 401.
Cleland, J. 1863 A, 119 ("fishes").
1863 B, 308.
1870 A, 120 ("fishes").
Cockerell, T. D. A. 1911 E, 209 ("fish").
1913 B, 119 ("fishes").
1916 B, 187 ("fish").
Collinge, W. E. 1894 A, 499 ("fishes").
1895 B, 274 ("fishes").
Connell, A. 1835 A, 300 ("fishes").
Cope, E. D. 1885 BB, 63.
1891 N, 7, 10.
Coulon, L. 1903 A, 99 ("poissons").
Coyle, R. F. 1909 A, 582 ("fishes").
Cunningham, J. T. 1912 A, 231-440 ("fishes").

Cuvier, G. 1801 A, 25 ("poissons").
1803 A, 166 ("poissons").
1812 A, 123 ("poissons").
1814 A, 73 ("poissons").
1815 A, 102 ("poissons").
Dahl, K. 1909 A, 758 ("fish").
Dana, J. D. 1863 A, 31 ("fishes").
1863 C, 343 ("fishes").
Darton, N. H. 1909 A, 567 ("fish").
Davidoff, M. 1879 A, 450 ("fische").
Dean, B. 1900 A, 22 ("fishes").
1902 C, 702.
1904 C, 437 ("fishes").
1916 A ("fishes").
Dean and Eastman. 1916 A.
1917 A.
Deninger, K. 1914 A, 183-214 ("fische").
1915 A, 181-183 ("fische").
Dependorf, T. 1907 A, 546 ("fische").
Depéret, C. 1907 B ("poissons").
Diener, C. 1909 A, 32 ("fische").
Döderlein, L. 1902 A, 433 ("fische").
Dohrn, A. 1884 A, 140 ("fische").
Dollo, L. 1889 E, 146, 152 ("poissons").
1893 D, 5 ("poissons").
Dugès, A. 1905 A, 107 ("poissons").
1905 B, 798 ("fishes").
Dujardin, F. 1836 A, 319 ("poissons").
Eastman, C. R. 1898 E, 177 ("fishes").
1901 C, 327 ("fishes").
1904 I, 648 ("fishes").
1908 B, 23.
1913 B, 677 ("fishes").
1916 A, 655 ("fishes").
Ebner, V. 1896 A, 123 ("fische").
Eichwald, E. 1832 A, 858 ("fische").
Eimer, G. H. T. 1901 A, 258 ("fische").
Eisler, P. 1895 A, 17 ("fische").
Erdl, M. 1843 A ("fische").
Eschricht, D. F. 1851 A, 110 ("fische").
Fiebiger, J. 1905 A, 140 ("fische").
Filhol, H. 1899 A, 224 ("poissons").
Forster, A. 1905 A, 89-138.
Fraser, C. M. 1915 A, 113.
Frass, E. 1905 B, 354 ("fische").
Frassetto, F. 1915 A ("pesci").
Friedmann, E. 1897 A, 546 ("knochenfische").
Fryd, C. 1901 A, 7.
Fuchs, H. 1907 C, 24 ("fische").
Fulton, T. W. 1906 A, 48 ("fishes").
Fürbringer, M. 1902 A ("fishche").
Gaskell, W. H. 1905 A, 41 ("fishes").
1908 A, 525 ("fishes").
Gaupp, E. 1898 B, 826 ("fische").
1899 A, 1004 ("fische").
1906 A, 31 ("fische").
1906 B ("fische").
1911 C, 455 ("fische").
Gegenbaur, C. 1866 A, 121 ("fische").
1867 A, 55 ("fische").
1867 B, 374 ("fische").
1870 C, 398 ("fische").
Geoffroy-St. Hilaire, E. F. 1807 A, 357 ("poissons").
1807 B, 413 ("poissons").
1807 C, 87 ("poissons").
1807 E, 342 ("poissons").
1817 A, 125 ("poissons").
Geoffroy-St. Hilaire, E. F. 1817 B, 185 ("poissons").
1822 A, 76 ("poissons").
1822 B, 95 ("poissons").
1824 B, 143 ("poissons").
1824 C, 241 ("poissons").
1824 D, 420 ("poissons").
1825 A, 13 ("poissons").
1832 A, 348 ("poissons").
Gervais, P. 1859 A, 511 ("poissons").
Gill, T. 1873 E, 435.
1875 B, 251 ("teleosteous fishes").
1885 B, 29 ("fishes").
1896 A, 696.
1898 A, 696.
1903 A, 255 ("fishes").
1903 B, 488 ("fishes").
1905 A, 655.
1907 A, 491.
1909 A, 193 (Osteophora).
Goette, A. 1901 A, 533 ("fische").
Goodrich, E. S. 1906 A, 333 ("fish").
1909 A, 210 (Osteichthyes).
1910 A, 24 ("fish").
1913 A, 80 ("fishes").
1924 A, 935 (Osteichthyes).
Goodsir, J. 1857 A.
1857 B.
Gregory, W. K. 1910 B, 509 ("fishes").
1923 A, 238 (Osteichthyes).
Gregory and Adams 1915 A, 763 (Osteichthyes).
Gregory and Noble 1924 A, 436 ("fishes").
Green, J. 1858 A, 362 ("fishes").
Gulliver, G. 1896 A, 397 ("osseous fishes").
Haller, G. 1924 A, 305 ("knochenfische").
Hase, A. 1911 B.
1913 A ("fische").
Hasse, C. 1872 A, 417-488.
1873 A, 584-610, pls. xxvii, xxviii ("fische").
Hatschek, B. 1889 A, 82 ("fische").
Hay, O. P. 1897 A, 131 ("fishes").
1917 H, 383 ("fishes").
Heilprin, A. 1887 A, 418 ("fishes").
Hennig, E. 1920 B, 112.
Henshaw, H. W. 1912 A, 318 ("fishes").
Hertwig, O. 1892 A.
Hilgard, T. C. 1857 A, 98 ("fishes").
1859 A, 335 ("fishes").
1860 A, 678 ("fishes").
Hilzheimer, M. 1913 A, 468 ("fische").
Hofer, B. 1890 A, 103 ("fische").
Hollard, H. 1863 A, 38 ("poissons").
1863 B, 633 ("poissons").
1864 A, 5 ("poissons").
1864 B, 241 ("poissons").
1864 C, 359 ("poissons").
Houssay, F. 1909 A, 617 ("poissons").
1909 B, 943 ("poissons").
1909 C, 1076 ("poissons").
Howes, G. B. 1894 A, 78, 87 (Osteichthyes).
Hubbs, C. L. 1919 A, 570.
1919 B, 61 ("fishes").
1926 A, 57 ("fishes").
Hubrecht, A. A. W. 1908 A, 56 (Osteophora).
Huene, F. 1907 A, 151-152 ("fische").
1908 H, 156-175 ("fische").
1910 F, 147-163 ("fische").
1911 G, 146-161 ("fische").
1926 A, 261 ("fische").

Huntsman, A. G. 1919 A, 592.
Huschke, E. 1822 A, 889 ("fische").
Hussakof, L. 1910 A, 925 ("fishes").
Huxley, T. H. 1853 A, 150 ("mackerel").
1859 D, 442 ("fishes").
1859 H, 33, 44 ("fishes").
1863 E, 418.
1863 F, 187, 189 ("bony-fish").
1870 F, 538.
1876 E, 84 ("fishes").
1881 A, 454 ("fishes").
Hyrtl, C. J. 1849 A, 79 ("fische").
1862 A, 95 ("fische").
Ihring, H. 1878 A, 74 ("knochenfische").
1909 A, 287 ("fische").
Jacobshagen, E. 1920 A, 88, 95 ("fische").
Jaekel, O. 1901 B, 52 ("fische").
1903 F, 28, 47.
1906 D, 188.
1909 A, 200.
1909 D, 707 ("fische").
1911 A, 25.
1913 A, 77 ("fische").
1925 A, 165 ("fische").
Jordan, D. S. 1898 A, 173 ("fishes").
1901 A ("fishes").
1902 A, 240 ("fishes").
1904 A, 597 ("bony fishes").
1905 A, 598 (Teleostomi).
1905 B ("fishes").
1919 C, 337 ("fishes").
1922 C, 177 ("fishes").
1923 A ("fishes").
Jordan and Gilbert 1882 A, 73.
Kehrer, F. A. 1896 A, 346 ("fische").
Kemna, A. 1903 A, 340 ("poissons").
Kesteven, H. L. 1922 A, 307 ("fishes").
Keyes, C. 1924 A, 233 ("fishes").
Kingsley, J. S. 1885 A, 90.
1901 A, 197 ("bony fishes").
1925 A, 27, 223, 231 ("fishes").
Klaatsch, H. 1893 B, 649 ("fische").
1893 C, 143 ("fische").
Klein, E. E. 1868 A ("fische").
1884 A ("knochenfische").
1885 A ("knochenfische").
Kner, R. 1860 B, 807 ("fische").
1861 A, 232 ("fische").
Koken, E. 1889 B, 117 ("fische").
1893 B, 640 ("fische").
1898 B, 142 ("fische").
Kolmer, W. 1923 A, 530 ("fische").
Kolzoff, N. K. 1896 A, 514 ("knochenfische").
Köstlin, O. 1844 A, 304 ("knochenfische").
Larger, R. 1913 A ("poisson").
Lavocat, A. 1884 A, 1126 ("poissons").
1885 A, 28 ("poissons").
1888 A, 62 ("poissons").
1889 A, 42 ("poissons").
1896 B, 193 ("poissons").
1897 A, 138 ("poissons").
Le Damany, P. 1902 A, 333 ("poissons").
1903 G, 150, fig. 7 ("poissons").
Ledouble, A. F. 1903 A, 647 ("poissons").
1906 A, 551 ("poissons").
Leidig, F. 1850 A, 170 ("knochenfische").
Lemoine, V. 1889 A, 233 ("poissons").
Leunis and Ludwig 1883 A, 631.
Lönnberg, E. 1901 A.
1902 A.
Lütken, C. F. 1881 A, 1-14; 107-123.
Macdonald, W. 1839 A, 69 ("osseous fishes").
1841 A, 131 ("fishes").
1863 A, 57 ("fishes").
1871 A, 473 ("osseous fishes").
M'Donnell, R. 1864 A, 161 ("fishes").
McMurrich, J. P. 1912 A, 168.
Mandl, L. 1840 A, 338 ("poissons").
Marsh, O. C. 1899 C, 71 ("fishes").
Mayer, A. F. 1862 A, 108 ("fische").
Meckel, J. F. 1825 A ("knochenfische").
Meunier, S. 1903 A, 774 ("poissons").
Mivart, St. G. 1871 B, 378 ("osseous fishes").
Montgomery, T. H. 1901 A, 21733 ("fishes").
Moodie, R. L. 1920 C, 47 ("fishes").
1922 B, 320 ("fishes").
Mutel, —. 1921 A, 522 ("poissons").
Noorden, C. 1883 A, 235 ("knochenfische").
Nusbaum, J. 1908 A, 513 ("knochenfische").
Oken, L. 1818 A, 512 ("fische").
1819 A, 1531 ("fische").
1823 B, 448 ("fische").
Ortman, A. E. 1901 A, 694 ("fishes").
Osborn, H. F. 1916 E, 511 ("fishes").
1917 B, 313 ("fishes").
1926 C, 339 ("fishes").
Osburn, R. C. 1906 B, 585 ("fishes").
Owen, R. 1846 E ("fishes").
1848 B ("osseous fishes").
1868 A, 900.
Paramore, R. H. 1910 A, 1393 ("fishes").
Parker, G. H. 1904 A, 496 ("fishes").
Perrier, E. 1920 A ("poissons").
Pompeckj, J. F. 1914 A, xcii ("fische")
Pouchet, G. 1875 A, 288 ("poissons osseux").
1878 A, 34, 140 ("poissons osseux").
Rauther, M. 1919 A, 215 ("fische").
Regan, C. T. 1906 A, 724.
1909 B, 75.
1924 A, 175 ("fishes").
Reichert, K. B. 1849 A, 494, 508 ("fische").
Reis, O. 1894 B, 87 ("fische").
Retterer, E. 1905 A, 125 ("poissons").
1905 C, 246 ("poissons").
1905 D, 366 ("poissons").
1908 B, 537 ("poissons").
Richardson, J. 1846 A, 199 (Ostinopteri); 329 (Ossei).
Ridewood, W. G. 1896 A, 380 ("fishes").
Ryder, J. 1885 E, 90 ("fishes").
1887 A, 344 (Ichthyes, in part).
Sewertzoff, A. N. 1918 A, 206 ("fishes").
1926 D, 76, 90 (Osteichthyes).
Sabatier, A. 1896 A, 121 ("poissons").
1897 A, 932.
1898 A, 930 ("poissons osseux").
1902 A, 100 ("poissons").
1903 A, 893 ("poissons").
Sagemehl, M. 1883 A ("knochenfische").
Salbey, R. 1868 A, 729 ("fische").
Schlosser, M. 1917 A, 131 ("fische").
Schmalhausen, J. J. 1913 C ("fische").
1917 A, 108 ("fishes").
1923 A, 534 ("fische").
Schubert, R. J. 1906 A, 627 ("fische").
Schuchert and Barrell 1914 A, 25.

Scott, W. B. 1917 A, 176 ("fishes").
Seeley, H. G. 1872 B, 26 ("fish").
Serres, M. 1852 B, 192 ("poissons").
Sewertzoff, A. N. 1896 A, 271 ("fische").
1897 A, 411 ("knochenfische").
1923 A, 408 (Osteichtyes).
1923 B, 145 (Osteichthyes).
1926 A, 508, 526, 537 (Osteicthyes).
1926 B, 579 (Osteichties).
1926 C, 44 (Osteichthyes).
1926 E, 555 (Osteichthyes).
Shann, E. W. 1919 A, 532 (Osteichthyes).
Shepherd, C. A. 1910 A, 418.
Simpson, G. G. 1925 D, 289.
Solger, B. 1880 A, 364 ("knochenfische").
Spencer, W. B. 1886 A, 233.
Springer, F. 1924 A, 233 ("fishes").
Stadtmüller, F. 1926 A, 155 ("knochenfische").
Stannius, H. 1842 C, 97 ("fische").
1849 A, 533 ("knochenfische").
Starks, E. C. 1900 A ("fish").
1905 A, 754 ("fishes").
1908 A, 413 ("fish").
1926 A, 82 ("fishes").
Steenstrup, J. 1861 A, 368 ("poissons").
Steinman, G. 1907 A, 405 (Euichthyes).
1908 A, 205 ("knochenfische").
1912 A, 48 ("fische").
Stephan, P. 1900 A, 281 ("poissons").
Storch, O. 1911 A, 195 ("fische").
Strecker, C. 1887 A, 301 ("knochenfische").
Stromer, E. 1912 A, 15.
1920 A, 18 ("fische").
Sutton, J. B. 1884 A, 570 ("fish").
Swinnerton, H. H. 1911 A, 447 ("fishes").
Taschenberg, O. 1894 A, 3345-3366.
Taylor, H. F. 1916 A, 289 ("fish").
Terra, P. 1911 A, 134, 197.
Terry, R. J. 1909 A, 525 ("fishes").
Thilo, O. 1896 A, 285 ("fische").
1896 B, 96 ("fische").
1897 A, 171 ("fische").
1898 A, 141 ("fische").
1898 B, 81 ("fische").
1900 A, 18 ("fische").
1900 B, 19 ("fische").
Thilo, O. 1903 A, 528 ("fische").
1913 A, 289 ("fische").
Tomes, C. S. 1875 C, 362 ("fish").
1877 A, 44 ("fish").
1900 A, 35 ("osseous fishes").
Traquair, R. H. 1900 C, 502 ("fishes").
Vaillant, L. 1874 A, 406 ("poissons").
Vanhöffen, E. 1891 A, 134 ("fische").
Veit, O. 1916 A, 375 ("fische").
Versluys, J. 1912 A, 501 ("fische").
1925 B, 182 ("knochenfische").
Wagner, R. 1843 A, 204 (Ostacanthi).
Wallace, A. R. 1876 A, i, 494; ii, 575 ("fishes").
Watson, D. M. S. 1917 A, 981 ("fish").
1917 B, 61 ("fishes").
Webb, W. M. 1905 A, 59 ("fishes").
Weber, E. H. 1821 A, 1059.
Weidenreich, F. 1926 A, 46 ("fische").
White, C. 1885 A, 44 ("fishes").
Whitehouse, R. H. 1914 A, 522 ("fishes").
1918 A, 135 ("fishes").
Wiedersheim, R. 1881 B, 326.
1892 A, 43 ("fische").
Wilbrand, J. B. 1824 A, 982 ("fische").
Wilder, B. G. 1865 A, 56 ("fishes").
1872 B ("fishes").
Williamson, W. C. 1851 A, 643 ("fishes").
Winslow, G. M. 1898 A, 186 ("fishes").
Woodward, A. S. 1898 B, 18.
1898 C, 257 ("fishes").
1909 A, 323 ("fishes").
1910 B, 464 ("fishes").
1917 D, lxv ("fishes").
1920 D ("fishes").
1922 C, 53, 61.
Woodward and Sherborn 1891 A, 26.
Woodward, H. 1904 B, 139 ("fishes").
Wright, E. P. 1878 A, 286 ("fishes").
1878 B, 149 ("fishes").
Wyman, J. 1867 B, 264 ("fishes").
Ziegler, H. E. 1901 A ("knochenfische").
1908 A, 721 ("knochenfische").
Zittel, K. A. 1901 A, 409 ("fishes").
Zittel and Koken 1911 A, 3 (Pisces, in part).
Zittel and Schlosser 1923 A, 5 (Pisces, in part).
Zittel and Woodward 1902 A, 2.

Subclass Ostracophora Cope.

Cope, E. D. 1891 G, 646.
Hay, O. P. 1902 A, 339 (Aspidoganoidei).
Abel, O. 1912 F, 206, 476 ("ostracodermen").
Barrell, J. 1915 B, 372 ("ostracoderms").
Berry, E. W. 1925 A, 356 ("ostracoderms").
Bridge, T. W. 1904 A, 149, 522, 749 (Ostracodermi).
Bryant, W. L. 1926 B, 256 ("ostracoderms").
Claypole, E. W. 1900 A, 248 ("ostracoderms").
Cope, E. D. 1889 R, 852, 853 (Arrhina).
1891 N, 9.
Cunningham, J. T. 1912 A, 250 ("ostracoderms").
Dean, B. 1900 A, 13 ("ostracoderms"); 22 (Ostracophora).
1901 C, 110, seq. (Ostracophori).
1912 A, 226 ("ostracophores").
Dollo, L. 1903 D, 700 ("ostracodermes").
1910 A, 390 ("ostracodermes").
Eastman, C. R. 1898 E, 183 (Ostracodermi).
1900 G, 287 ("ostracoderms").
1901 D, 329 ("ostracoderms").
1904 C, 141 ("ostracophores").
1905 A, 46 ("ostracophores").
1906 D, 2 (Ostracophori).
1907 B, 23, 24, 232 (Ostracophori).
1908 A, 54, 59, 69 ("ostracophores").
1917 A, 237 (Ostracodermi).
Fraipont, C. 1912 A, 66 ("ostracophores").
Gadow, H. 1910 A, 27 (Ostracodermi).
Gaskell, W. H. 1908 A, 326, 343 (Ostracodermata).
Goodrich, E. S. 1904 A, 493 (Ostracodermi).
1909 A, 194, 407 (Ostracodermi).
Gregory, W. K. 1915 D, 318, 341 (Ostracodermi).
1922 A, 3 ("ostracoderms").
1928 A, 4, fig. 2 ("ostracoderms").
Hussakof, L. 1906 A, 135 (Euostracophora).

Hussakof and Bryant 1919 A, 21 (Euostracophori).
Jaekel, O. 1902 A, 103 ("placodermen" in part).
Jordan, D. S. 1903 A, 135 (Aspidoganoidei, Ostracophora).
1905 A, i, 568; ii, 584 (Ostracophori).
1907 B, 223, 759 (Ostracophori).
1923 A, 84 (Ostracophori).
Kemna, A. 1903 A, 347 ("ostracodermes").
1904 A, 14 ("ostracodermes").
Keyes, C. A. 1922 A, pl. iii (Ostracodermata).
Kiaer, J. 1924 A, *passim* (Ostracodermi).
1928 A, 118 ("ostracoderms").
Kingsley, J. S. 1925 A, 10, 90 (Ostracoderma).
Lankester, E. R. 1897 A, 45 (Ostracodermi).
Moodie, R. L. 1915 I, 138, 140 ("ostracoderms").
1926 A, 75.
1928 A, 348 (Ostracodermi).
Parker and Haswell 1897 A, 243 (Ostracodermi).
Patten, W. 1902 B, 180 ("ostracoderms").
1903 A, 223 ("ostracoderms").
1903 B, 828 ("ostracoderms").
1903 C, 488 ("ostracoderms").
1903 D, 1 ("ostracoderms").
1904 A, 123 ("ostracoderms").
Patten, W. 1905 A, 297 ("ostracoderms").
1905 B, 140 ("ostracoderms").
1912 A, 485 ("ostracoderms").
1925 A, x ("ostracoderms").
1926 A, 237 ("ostracoderms").
Raymond, P. E. 1925 A, 433 ("ostracoderms").
Schmalhausen, J. J. 1913 A, 76 (Ostracodermi.)
Schuchert, C. 1915 A, 686 (Ostracodemi).
Stetson, H. C. 1928 A, 230.
Stromer, E. 1905 H, 216 (Ostracodermi).
1912 A, 36, 48 (Ostracodermi).
1920 A, 11 (Ostracodermi).
Thevenin, A. 1910 A, 35 ("ostracoderms").
Traquair, R. H. 1900 C, 504 (Ostracodermi).
1903 A, 731 (Ostracodermi).
Woodward, A. S. 1897 B, 144 (Ostracodermi).
1906 A, 313 (Ostracodermi).
1906 C, 267 ("ostracoderms").
1910 D, 31 ("ostracoderms").
1915 B, lxiii (Ostracodermi).
1920 D, 26 (Ostracodermi).
1922 C, 53 (Ostracodermi).
Woodward, H. 1904 B, 139 (Ostracodermi).
Zittel and Woodward 1902 A, 50 (Ostracodermi).

Order PTERASPIDOMORPHI Goodrich.

Goodrich, E. S. 1909 A, 195.
Unless otherwise indicated, the authors, as cited, employ the name Heterostraci.
Hay, O. P. 1902 A, 339.
Adams, L. A. 1919 A, 112.
Andreæ, A. 1901 B, 507.
Barrell, J. 1915 B, 402.
Bridge, T. W. 1904 A, 524, 742.
Claypole, E. W. 1900 A, 245.
Cope, E. D. 1891 N, 9.
Dean, B. 1900 A, 22.
1901 C, 113.
Dean, Gudger, Henn 1923 A, 401, 663.
Eastman, C. R. 1903 E, 573.
1907 B, 23, 25, 27, 28.
1908 A, 69, 72.
Goodrich, E. S. 1908 A, 754.
Jaekel, O. 1903 D, 41.
1911 A, 32.
1913 A, 85 ("heterostraken").
Jordan, D. S. 1905 A, i, 573; ii, 574.
1907 B, 759.
1923 A, 85.
Kemna, A. 1903 A, 348, 350, 368.
Kiaer, J. 1924 A, 114, 116, 123 (Heterostraci); 116 (Pteraspidomorphi).
1928 A, 117, 125 ("pteraspids").
Koken, E. 1899 B, 172 (Aspidorhini).
Lankester, E. R. 1868 A, 14, 16.
1870 C, 62.
Osburn, R. C. 1907 B, 173.
Parker and Haswell 1897 A, 243.
Pompeckj, J. F. 1913 A, 1110.
Regan, C. T. 1904 A, 344.
Rohon, J. V. 1902 A, 27 (Aspidorhini).
Rosén, N. 1916 A, 11, 30.
Sauvage, H. E. 1901 C, 66.
Schlosser, M. 1917 A, 132, 133.
Simpson, G. G. 1925 D, 289.
1926 J, 173 ("ostracoderms").
Stetson, H. C. 1928 A, 223.
Stromer, E. 1912 A, 37.
1920 A, 11, 12.
Traquair, R. H. 1899 A, 853.
1899 C, 602.
1900 C, 504.
1903 A, 731.
Woodward, A. S. 1922 C, 54.
Woodward, H. 1878 A, 6.
1904 B, 140.
1920 D, 28.
Zittel and Koken 1911 A, 28.
Zittel and Schlosser 1923 A, 29.
Zittel and Woodward 1902 A, 50.

THELODONTIDÆ Jordan.

Jordan, D. S. 1905 A, II, 573.
Unless otherwise indicated the authors, as quoted, use the names Cœlolepidæ or Cœlolepididæ.
Andreæ, A. 1901 B, 505.
Abel, O. 1919 A, 72.
Barrell, J. 1915 B, 398.
Bryant, W. L. 1926 B, 257.
Dollo, L. 1903 D, 701.
Eastman, C. R. 1901 C, 328.
1907 B, 23, 27, 91.
Eastman, C. R. 1908 A, 55, 69, 160.
Goodrich, E. S. 1909 A, 196.
Jordan, D. S. 1923 A, 85 (Thelodontidæ).
Kemna, A. 1904 A, 12 ("cœlolépidés").
Kiaer, J. 1924 A, 17, 18, 24, 94, 114, 116, 117, 119.
Pander, C. H. 1856 A, 64 ("cœlolepiden").
Pompeckj, J. F. 1913 A, 1111.
Sauvage, H. E. 1901 C, 65.
Schlosser, M. 1917 A, 146 ("cœlolepiden").
Stetson, H. C. 1928 A, 221.

Stromer, E. 1905 D, 314 ("cœlolepiden").
Traquair, R. H. 1899 A, 828, 843.
1899 C, 597.
1903 A, 731.
Woodward, A. S. 1891 A, 157.
Woodward, A. S. 1898 B, 28.
1900 D, 71.
Zittel, Eastman, etc. 1902 A, 50.
Zittel and Koken 1911 A, 28.
Zittel and Schlosser 1923 A, 29.

THELODUS Agassiz. Type *T. parvidens* Agassiz.

Agassiz, L. 1839, Murchison's Silur. Syst., 606, 704, pl. iv, figs. 34-36.
Abel, O. 1919 A, 70, 73, figs. 33, 34.
1920 A, 320, fig. 507.
Adams, L. A. 1919 A, 120.
Andreae, A. 1901 B, 505.
Barrell, J. 1915 B, 394.
Crook, C. V. 1901 A, 119.
Dean, Gudger, Henn 1923 A, 401, 663.
Deecke, W. 1926 A, 185.
Dollo, L. 1910 A, 390.
Eastman, C. R. 1901 C, 328.
1908 A, 55, fig. 1.
Goodrich, E. S. 1908 A, 754, fig. 196.
1909 A, 196, 517, fig. 168.
Hilzheimer, M. 1913 A, 468.
Jaekel, O. 1911 A, 36, fig. 23.
Jordan, D. S. 1919 B, 309 (Syn. of Asterodon).
MacBride, E. W. 1910 A, 18.
M'Coy, F. 1853 C, 14.
1855 A, 576.
Murchison, R. 1853 A, 16.
1854 A, 238.
Pander, C. H. 1856 A, 66, pls. iv, vi (Cœlolepis); 67 (Pachylepis, Thelopis).
Pompeckj, J. F. 1913 A, 1110, figs. 3, 6.
Preobrajensky, J. A. 1911 A, 26 (Cœlolepis, Thelodus).
Powrie, J. 1870 A, 298, pl. xiv, fig. 16 (Cephalopterus).
Roemer, F. 1885, Palaeont. Abhandl., ii, 359, pl. xxxi, figs. 21-25.
Rohon, J. V. 1893 A, 11.
Rosén, N. 1916 A, 12, fig. 5.
Sauvage, H. E. 1901 C, 63 (Thelodus, Cœlolepis)
Smith, B. 1910 A, 656.
Stensiö, E. A. 1927 A, 331.
Stetson, H. C. 1928 A, 221.
Stromer, E. 1912 A, 37, fig. 47.
1920 A, 13.
Traquair, R. H. 1899 A, 829, pl. i (Cœlolepis a syn.).
1899 C, 595, pl.
1900 B, 465.
1900 D, 66.
1903 A, 731.
1905 B, 880, pl. i, text-fig. 1.
Woodward, A. S. 1891 A, 158 (Cœlolepis, Thelodus).
1898 B, 28 (Cœlolepis, Thelodus).
1904 C, 186.
1906 C, 267, fig. 1.
1920 D, 28, fig. 28.
1922 C, 55.
Zittel, Eastman, etc. 1902 A, 51, fig. 99.
Zittel and Koken 1911 A, 29, figs. 33, 34.
Zittel and Schlosser 1923 A, 29, fig. 35.

Thelodus macintoshi Stetson.

Stetson, H. C. 1928 A, 223, figs. 1-6.
Silurian (Niagara?); New Brunswick.

Thelodus sp. indet.

Eastman, C. R. 1907 B, 13. Lower Devonian (Oriskany); Nova Scotia.
1908 A, 72, 266, pl. i, figs. 7, 8, 15; pl. ii, figs. 13, 14 (This genus?). Middle Devonian (Columbus limestone); Ohio.
Stauffer, C. R. 1909 A, 169 (Cœlolepis); 170. Middle Devonian (Columbus); Ohio.

ASTRASPIDÆ Eastman.

Eastman, C. R. 1917 A, 237.
Jordan, D. S. 1923 A, 85.
Zittel and Schlosser 1923 A, 31.

EOICHTHYS Bryant. Type *E. howelli* Bryant.

Bryant, W. L. 1926 A, 236.

Eoichthys howelli Bryant.

Bryant, W. L. 1926 A, 236.
Howell, B. F. 1926 A, 236 ("fish plate?").
Cambrian (St. Albans shale); Vermont. A doubtful fish plate. No description.

ASTRASPIS Walcott. Type *A. desiderata* Walcott.

Hay, O. P. 1902 A, 342.
Clarke, J. M. 1895 A, 121 ("fossil fishes").
Eastman, C. R. 1915 B, 439.
1917 A, 238.
Rogers, A. F. 1924 A, 546.
Schlosser, M. 1917 A, 132 ("spuren von fischen").
Stensiö, E. A. 1927 A, 314.
Stromer, E. 1920 A, 10, 11.
Vaillant, L. 1902 A, 1321 ("poissons").
Walcott, C. D. 1891 A, 245 ("fish").
Woodward, A. S. 1921 A, 179.
Woodward, A. S. 1922 C, 58.
Zittel and Schlosser 1923 A, 32.

Astraspis desiderata Walcott.

Hay, O. P. 1902 A, 342.
Cockerell, T. D. A. 1913 A, 246.
Eastman, C. R. 1907 B, 12.
1908 A, 75.
1917 A, 238, pl. xii, figs. 5, 6.
Jaekel, O. 1892 C, 168 ("fish remains").
1895 D, 162.

Jordan, D. S. 1905 A, i, 578 (Asteraspis).
Merrill, G. P. 1907 A, 7.
Woodward, A. S. 1920 D, 33.
Ordovician (Black River); Colorado.

Astraspis sp. indet.

Cockerell, T. D. A. 1913 A, 246. Ordovician?; Colorado.

PTERASPIDÆ Claypole.

Hay, O. P. 1902 A, 339.
Abel, O. 1919 A, 82.
Allis, E. P. 1905 A, 488.
Andreæ, A. 1901 B, 507.
Arldt, T. 1907 D, 677.
Bridge, T. W. 1904 A, 527.
Bryant, W. L. 1926 B, 256.
Dean, B. 1901 C, 110 ("pteraspids").
Dean, Gudger, Henn 1923 A, 401, 663.
Deecke, W. 1913 A, 87.
Drevermann, F. 1904 A, 285 ("pteraspiden").
Eastman, C. R. 1907 B, 23.
1908 A, 55 ("pteraspidians").
Gebhardt, F. A. M. W. 1907 A, 73 ("pteraspiden").
Goodrich, E. S. 1908 A, 754 ("pteraspids").
1909 A, 198.
Hilzheimer, M. 1913 A, 471.
Howes, G. B. 1902 A, 525 ("pteraspidians").
Jaekel, O. 1902 A, 105 ("pteraspiden").
1906 C, 156 ("pteraspiden").
1906 D, 187 ("cyathaspiden").
1907 A, 186 ("pteraspiden," "cyathaspiden").
1911 A, 33 (Pteraspidi, suborder).
1919 A, 73 ("pteraspiden").
1921 A, 226, 233 ("pteraspiden").
1926 A, 183.
Jordan, D. S. 1905 A, i, 570, 575.
1907 B, 759.
1923 A, 85.
Kemna, A. 1903 A, 347, 350 ("ptéraspidés").
1904 A, 14 ("ptéraspidés").
Kiaer, J. 1924 A, 91, 92, 105, 114, 115, 122.
Koken, E. 1899 B, 172.
Lankester, E. R. 1897 A, 45.
Osborn, H. F. 1902 H, 749 ("pteraspids").
Patten, W. 1902 A, 392.
1903 B, 827, 831.
1912 A, 264, 366 (Pteraspida).
Pompeckj, J. F. 1913 A, 1110, 1113.
Reis, O. M. 1894 A, 64 ("pteraspiden").
Rohon, J. V. 1902 A, 4, 27.
Sauvage, H. E. 1901 C, 66.
Schlosser, M. 1917 A, 132, 133 ("pteraspiden").
Simpson, G. G. 1925 D, 289.
Steinmann, G. 1907 A, 417.
Stensiö, E. A. 1927 A, 315.
Stetson, H. C. 1928 A, 228.
Stromer, E. 1920 A, 16.
Trouessart, E. L. 1906 A, 213.
Woodward, A. S. 1898 B, 5.
1920 D, 29 ("pteraspidians").
Zittel and Koken 1911 A, 30.
Zittel and Schlosser 1923 A, 32.
Zittel and Woodward 1902 B, 52.

PTERASPIS Kner. Type *Cephalaspis lewisii* Agassiz.

Hay, O. P. 1902 A, 339.
Abel, O. 1907 D, (161).
1912 F, 207, 476, 695, fig. 464.
1919 A, 83, figs. 44-47.
1920 A, 322.
Adams, L. A. 1919 A, 121.
Allis, E. P. 1905 A, 488.
Andreæ, A. 1901 B, 507, fig. 3.
Alth, A. 1884 A, 160.
Barkas, W. J. 1874 D, 552.
Bordage, E. 1892 A, 333.
Bridge, T. W. 1904 A, 527, 753.
Bryant, W. L. 1926 B, 256, 258.
Claypole, E. W. 1896 B, 356.
Cunningham, J. T. 1912 A, 250.
Dean, B. 1904 D, 64.
Dean, Gudger, Henn 1923 A, 401, 663.
Dorlodot, H. 1912 A, 21.
1912 B, 64.
Drevermann, F. 1904 A, 275.
Eastman, C. R. 1901 C, 328.
1902 C, 506.
1905 A, 40, fig. 3.
1908 A, 58.
Fraipont, C. 1912 A, 66.
Frech, F. 1897 A, 123.
Gaskell, W. H. 1895 A, 36.
Goodrich, E. S. 1908 A, 754, fig. 196.
1909 A, 195, fig. 166.
Gregory, W. K. 1915 D, 319.
Haeckel, E. 1868 A, 445.
Heilprin, A. 1887 A, 429.
Hussakof, L. 1906 A, 134.
Huxley, T. H. 1858 D, 510, pl. xv.
1861 D, 458.
1861 E, 417, figs. 1, 2.
Jaekel, O. 1902 A, 105.
1903 E, 92.
1911 A, 33, fig. 18.
1919 A, 74.
1927 A, 261, fig. 6.
Jordan, D. S. 1819 B, 232.
Kemna, A. 1903 A, 345, figs. 7, 8.
1904 A, 15, figs. 1-4.
Kiaer, J. 1924 A, 91.
1928 A, 119, pl. xii; text-figs. 1-3.
Kingsley, J. S. 1925 A, 90.
Lankester, E. R. 1864 C, 442.
1864 D, 292.
1865 B, 517.
1868 A, 14, 28, figs. 4, 8.
1897 A, 45.
1905 A, 257, fig. 185.
Leriche, M. 1903 A, 163.
1906 B, 341.
1906 C, 420.
1912 A, 39.
1912 B, 49.
1924 A, 143.
1925 A, 19, figs. 1, 2.
Lütken, C. 1868 C.
Mitchell, H. 1863 A, 31.

Moodie, R. L. 1926 A, 76, 77.
Osborn, H. F. 1905 N, 235.
Patten, W. 1894 A, 435.
1902 A, 379, 389, figs. 1-3.
1902 B, 181, fig. 6.
1903 A, 224.
1903 B, 828, figs. 1-3.
1903 D.
1912 A, 293, 364, figs. 196, 197, 245.
Pompeckj, J. F. 1913 A, 1110, fig. 8.
Powrie, J. 1861 A, 189.
1863 A, 67, fig.
1870 A, 284.
Regan, C. T. 1904 A, 345.
Rohon, J. V. 1902 A.
Schuchert and Levene 1927 A, 266, fig.
Simpson, G. G. 1926 K, 173.
Stensiö, E. A. 1926 A, 1, figs. 1-6.
1927 A, 316.
Stetson, H. C. 1928 A, 228.
Storms, R. 1891 A, 116.
Stromer, E. 1905 D, 314.
1920 A, 14, 15.
Symonds, W. S. 1884 A, 161.
Traquair, R. H. 1900 C, 504.
Trouessart, E. L. 1906 A, 213.
Whiteaves, J. F. 1901 A, 182.
Woodward, A. S. 1898 B, 6, figs. 3-6.
1900 E, 203.
1910 D, 31.
1920 D, 29.
1922 C, 55, figs. 50, 51.
Woodward, H. 1878 A, 7, pl. i, fig. 3.
Zittel and Koken 1911 A, 31.
Zittel and Schlosser 1923 A, 33, figs. 38, 39.
Zittel and Woodward 1902 A, 52.

Pteraspis crouchii Lankester.

Lankester, E. R. 1865 A, 58.
Abel, O. 1919 A, 82, figs. 44-45.
1920 A, 322, fig. 511 (P. crouchi).
Alth, A. 1884 A, 170.
Ami, H. M. 1901 B, 309, 311 (This species?).
Dawson, G. M. 1899 A, 182 (Pteraspis sp.).
Fraipont, C. 1912 A, 69.
Kemna, A. 1904 A, 15, figs. 1-4 (P. crouchi).
Lankester, E. R. 1864 D, 292.
1868 A, 30, pl. iii; pl. iv, fig. 5; pl. vi, figs. 4, 7, 8; pl. vii, figs. 4, 8, 11.
1905 A, 259, figs. 187, 188.
Leriche, M. 1903 A, 161, pls. v, vi, text-figs. 1, 2 (P. crouchi).
1906 C, 413, pl. ii, text-figs. 9-12.
1924 A, 145, pl. iii; text-figs. 2, 3 (P. crouchi).
1925 A, 25.
Stensiö, E. A. 1926 A, 3, figs. 1, 4.
1927 A, 317, fig. 86.
Twenhofel, W. H. 1913 A, 303 (This species?).
Woodward, A. S. 1887 A, 478, fig.
1891 A, 167.
1898 B, 6, fig. 5.
1901 C, 311.
1902 D, 203.
Lower Devonian (Knoydart); Nova Scotia; Europe.

Cyathaspis Lankester. Type *Pteraspis banksii* Huxley and Salter.

Hay, O. P. 1902 A, 340.
Abel, O. 1912 F, 476.
1919 A, 86, fig. 48.
Alth, A. 1884 A, 164.
Arldt, T. 1923 A, 482.
Barkas, W. J. 1874 D, 550.
Bryant, W. L. 1926 B, 256.
Claypole, E. W. 1896 B, 358.
Dean, Gudger, Henn 1923 A, 663.
Eastman, C. R. 1902 C, 506.
1903 E, 575.
1907 B, 30, 228.
Gaskell, W. H. 1908 A, 523.
Goodrich, E. S. 1909 A, 195, fig. 172.
Hussakof, L. 1906 A, 134.
Jaekel, O. 1902 A, 104.
1903 D, 58.
1903 E, 86, fig. 5.
1921 A, 226, 233.
1926 A, 162, 165, 183, fig. 5.
1927 A, 260.
Kemna, A. 1903 A, 351, 355, figs. 4, 5.
1904 A, 24.
Lankester, E. R. 1864 D, 292.
1868 A, 14, 26, fig. 5.
Leriche, M. 1906 B, 341, figs. 1, 2.
1906 C, 414.
Patten, W. 1902 B, 192.
1903 A, 224.
1903 B, 841.
Patten, W. 1903 D, 13.
1912 A, 344, 350.
Pompeckj, J. F. 1913 A, 1110, fig. 4.
Preobrajensky, J. A. 1911 A, 25.
Symonds, W. S. 1884 A, 161.
Traquair, R. H. 1900 C, 504.
Woodward, A. S. 1910 D, 31.
1920 D, 29.
1922 C, 55, fig. 49.
Woodward, H. 1878 A, 8, fig. 4.
Zittel and Koken 1911 A, 32.
Zittel and Schlosser 1923 A, 33, fig. 40.
Zittel and Woodward 1902 A, 53.

Cyathaspis acadica (Matthew).

Hay, O. P. 1902 A, 340.
Dana, J. D. 1896 A, 546 (Diplaspis).
Eastman, C. R. 1907 B, 12.
1908 A, 72.
Kiaer, J. 1924 A, 124.
Lambe, L. M. 1904 C, 14, 15, 33, 40.
1912 A, 3 (Diplaspis).
Matthew, G. F. 1907 A, 9 (Diplaspis).
Moodie, R. L. 1926 A, 67 (Coccosteus).
Silurian (Niagara?); New Brunswick.

Cyathaspis vaningeni Bryant.

Bryant, W. L. 1926 B, 269, pl. ii, fig. 1; pl. iv, fig. 2.
Silurian (Salina or Medina); New York.

Cyathaspis wardelli (Ruedemann).

Ruedemann, R. 1916, Bull. N. Y. State Mus., No. 189, 102, pl. xxxii, figs. 1-12; text-figs. 2, 3 (Anatifopsis).

Bryant, W. L. 1926 B, 266, pl. i, fig. 2; pl. ii, figs. 5, 6; pl. iv, fig. 1.
Silurian (Salina or Medina); New York.

PALÆASPIS Claypole. Type *P. americana* Claypole.

Hay, O. P. 1902 A, 340.
Arldt, T. 1923 A, 482 (Holaspis).
Bryant, W. L. 1926 B, 256, 258.
Claypole, E. W. 1896 B, 358.
1900 A, 248.
1903 A, 335.
Dean, Gudger, Henn 1923 A, 663.
Eastman, C. R. 1917 A, 239.
Frech, F. 1897 A, 123.
Goodrich, E. S. 1909 A, 199, fig. 170.
Jaekel, O. 1894 D, 466.
1919 A, 73, fig. 1 ("palæaspiden").
1925 A, 165 ("palæaspiden").
1928 A, 43 ("palæaspiden").
Kemna, A. 1903 A, 345.
Kiaer, J. 1924 A, 91.
Leriche, M. 1926 A, 18, pls. i, ii.
Osborn, H. F. 1916 E, 603, fig. 11.
1917 B, 165, fig.
Sewertzoff, A. N. 1926 C, 44 ("palæaspiden").
Simpson, G. G. 1926 K, 173.
Stensiö, E. A. 1926 A, 1.
1927 A, 316, 326.
Traquair, R. H. 1900 C, 504.
Zittel and Koken 1911 A, 32.
Zittel and Schlosser 1923 A, 33.
Zittel and Woodward 1902 A, 53.

Palæaspis americana Claypole.

Hay, O. P. 1902 A, 340 (P. americana, P. elliptica).
Bryant, W. L. 1926 B, 261, pl. i; pl. ii, fig. 1.
Chamberlin, T. C. 1900 A, 402 (Pteraspis).
Claypole, E. W. 1884 C, 34 ("fish").
1884 D, 270 ("fish").
1884 E, 326 ("fish").
1885 E, 90.
Dana, J. D. 1896 A, 557, figs. 800-804.
Eastman, C. R. 1907 B, 12, 29.
1908 A, 73.
1917 A, 239.
Lambe, L. M. 1904 C, 15 (P. elliptica).
Symonds, W. S. 1884 A, 159 ("fish").
Silurian (Salina); Pennsylvania.

Palæaspis bitruncata Claypole.

Claypole, E. W. 1884 A, 1224.
Hay, O. P. 1902 A, 340 (P. americana, in part).
Bryant, W. L. 1926 B, 264, pl. ii, fig. 3; pl. iii, figs. 2-5.
Claypole, E. W. 1885 E, 90.
Moodie, R. L. 1926 A, 67, 76.
Silurian (Salina); Pennsylvania.

EUPHANEROPIDÆ A. S. Woodward.

Hay, O. P. 1902 A, 341.
Eastman, C. R. 1907 B, 23.
Goodrich, E. S. 1909 A, 206.
Jordan, D. S. 1923 A, 86.
Kiaer, J. 1924 A, 136.
Lambe, L. M. 1904 C, 40.
Sauvage, H. E. 1905 A, 189.
Simpson, G. G. 1925 D, 289.
Zittel and Woodward 1902 A, 54.
This family may belong in the Cephalaspidomorphi (Osteostraci).

EUPHANEROPS Woodward. Type *E. longævus Woodward.*

Hay, O. P. 1902 A, 341.
Jordan, D. S. 1920 C, 491.
Kiaer, J. 1924 A, 125.
Lambe, L. M. 1912 A, 4.
Sauvage, H. E. 1905 A, 189.
Simpson, G. G. 1926 C, 400.
Whiteaves, J. F. 1907 B, 247.
Woodward, A. S. 1922 C, 54.
Zittel and Woodward 1902 A, 54.

Euphanerops longævus Woodward.

Hay, O. P. 1902 A, 341.
Ami, H. M. 1901 A, 174.
Clarke, J. M. 1913 A, 113.
Eastman, C. R. 1907 B, 16, 31.
1908 A, 280.
Kiaer, J. 1924 A, 29, 56, 58, 95, 125.
Lambe, L. M. 1904 C, 16, 34, 40.
Sauvage, H. E. 1905 A, 189.
Whiteaves, J. F. 1907 B, 248.
Zittel and Woodward 1902 A, 54.
Upper Devonian (Scaumenac); Quebec.

PSAMMOSTEIDÆ Traquair.

Traquair, R. H. 1899 A, 847.
Andreæ, A. 1901 B, 507.
Bryant, W. L. 1926 B, 257.
Dean, Gudger, Henn 1923 A, 663.
Eastman, C. R. 1908 A, 55.
1915 B, 439.
Goodrich, E. S. 1909 A, 198.
Jaekel, O. 1911 A, 36.
1925 B, 168 ("psammosteiden").
Jordan, D. S. 1923 A, 85.
Kiaer, J. 1915 A, 21.
1924 A, 114.
Patten, W. 1912 A, 366.
Preobrajensky, J. A. 1911 A, 19, 34.
Reis, O. M. 1894 A, 64 ("psammosteiden").
Sauvage, H. E. 1901 C, 66.
Woodward, A. S. 1922 C, 55.
Besides *Psammosteus*, Jordan refers to this family *Acanthaspis* and *Acantholepis*.

Psammosteus Agassiz. Type *P. mæandrinus* Agassiz.

Agassiz, L. 1844 B (1845), 103.
Dames, W. 1898 C, 331.
Dean, Gudger, Henn 1923 A, 401.
Goodrich, E. S. 1909 A, 196, fig. 166.
Kiaer, J. 1915 A, 21, 34, 54.
Matthew, W. D. 1908 H, 110.
Moodie, R. L. 1926 A, 76.
Preobrajensky, J. A. 1911 A, 24, 28, figs. 6-9.
Traquair, R. H. 1899 A, 847.
1900 C, 504.
Woodward, A. S. 1895 B, 38, fig. 1.
1911 B, 649, pl. ix.
1915 B, lxiv.
1920 D, 28.
Zittel and Schlosser 1923 A, 31.

Psammosteus anglicus? Traquair.

Traquair, R. H. 1898 A, 67, pl. i, figs. 1, 2.
Ami, H. M. 1901 B, 309, 312 (This species?).
Twenhofel, W. H. 1913 A, 303 (This species?).
Woodward, A. S. 1900 E, 203 (This species?).
1901 C, 312 (This species?).
1902 D, 203 (This spesies?).
Lower Old Red Sandstone; England: Lower Devonian (Knoydart); Nova Scotia.

Psammosteus arcticus Kiaer.

Kiaer, J. 1915 A, 23, pl. ii, figs. 5-7; pl. iii, figs. i-iv; pl. v, figs. 4-5.
Ellesmere Land.

Psammosteus complicatus Kiaer.

Kiaer, J. 1915 A, 26, pl. ii, fig. 8; pl. v, figs. 1-3; pl. vi, fig. 1-3; text-fig. 5.
Upper Devonian ; Ellesmere Land.

Order CEPHALASPIDOMORPHI Goodrich.

Goodrich, E. S. 1909 A, 200.
Unless otherwise indicated the authors, as cited below, use the name Osteostraci.
Hay, O. P. 1902 A, 340.
Abel, O. 1912 F, 432.
1919 A, 69.
1920 A, 321.
Andreae, A. 1901 B, 507.
Bridge, T. W. 1904 A, 527, 749.
Claypole, E. W. 1900 A, 247.
Cope, E. D. 1891 N, 9.
Dean, B. 1900 A, 22 et seq.
1901 C, 113.
Eastman, C. R. 1903 E, 573.
1907 B, 23, 27, 31.
1908 A, 69, 74.
Gaskell, W. H. 1908 A, 531.
Huene, F. 1926 A, 260.
Jaekel, O. 1903 D, 41.
Jordan, D. S. 1905 A, I, 575; II, 584.
1907 B, 759.
1923 A, 86.
Kemna, A. 1903 A, 348, 371.
Kiaer, J. 1924 A, 114, 115 (Osteostraci); 117 (Cephalaspidomorphi).
1928 A, 117, 124 ("cephalaspids").
Koken, E. 1899 B, 172 (Aspidocephali).
Lankester, E. R. 1868 A, 14.
1870 C, 33, 62.
Parker and Haswell 1897 A, 244.
Patten, W. 1902 A, 389 (Peltacephalata).
1903 D, 28 (Peltacephalata).
Pompeckj, J. F. 1913 A, 1113.
Regan, C. T. 1904 A, 340, 344.
1923 B, 458.
Rosén, N. 1916 A, 14, 30.
Schlosser, M. 1917 A, 132, 133.
Stensiö, E. A. 1927 A, 16.
Stromer, E. 1920 A, 11, 12.
Traquair, R. H. 1900 C, 504.
Woodward, A. S. 1922 C, 57.
Woodward, H. 1878 A, 7.
1920 D, 31.
Zittel and Koken 1911 A, 33.
Zittel and Schlosser 1923 A, 33.
Zittel and Woodward 1902 A, 54 (Aspidocephali).

CEPHALASPIDÆ Owen.

Owen, R. 1846 E, 50.
Hay, O. P. 1902 A, 340.
Abel, O. 1919 A, 73.
Agassiz, L. 1844 D, 142 ("cephalaspides").
Arldt, T. 1907 D, 644.
Bridge, T. W. 1904 A, 528.
Bronn, H. G. 1849 A, 780, seq. (Cephalaspides).
Carus, V. 1875 A, 596.
Dean, B. 1901 C, 110 ("cephalaspids").
Dean, Gudger, Henn 1923 A, 663.
Eastman, C. R. 1904 C, 143.
1906 D, 3.
1907 B, 23.
Fitzinger, L. J. 1873 A, 52 (Cephalaspides).
Gaskell, W. H. 1901 A, 267 (Cephalaspida).
Gebhardt, F. A. M. W. 1907 A, 73, 79 ("cephalaspiden").
Goodrich, E. S. 1904 A, 493.
1909 A, 203.
Gregory, W. K. 1915 D, 341.
Heckel, J. 1851 A, 219 ("cephalaspiden").
Hilzheimer, M. 1913 A, 471.
Hoernes, R. 1886 A, 548.
Howes, G. B. 1902 A, 525 ("cephalaspidians").
Huxley, T. H. 1858 D, 503, 506, pl. xiv.
Jaekel, O. 1902 A, 105 ("cephalaspiden").
1903 D, 53 ("cephalaspiden").
1907 A, 185 ("cephalaspiden").
1911 A, 33 ("cephalaspiden"); 34 (suborder Cephalaspidi).
1913 A, 85 ("cephalaspiden").
1919 A, 83 ("cephalaspiden").
1921 A, 226 ("cephalaspiden").
1925 B, 168 ("cephalaspiden").
1926 A, 168 ("cephalaspiden").
Jordan, D. S. 1907 B, 759.
1923 A, 86.
Kemna, A. 1903 A, 347 ("céphalaspidés").
Kiaer, J. 1924 A, *passim*, fig. 41.
Koken, E. 1899 B, 173.

Lankester, E. R. 1868 A, 1.
1870 C, 62.
1897 A, 45.
Lütken, C. 1871 A, 294 ("céphalaspides").
Moodie, R. L. 1928 A, 348.
Patten, W. 1894 A, 435.
1903 B, 827, 841.
1903 D, 15.
1912 A, 358.
Pompeckj, J. F. 1913 A, 1115.
Powrie, J. 1870 A, 299.
Raymond, P. E. 1925 A, 434 (Cephalaspida).
Regan, C. T. 1904 A, 344.
Schlosser, M. 1917 A, 132 ("cephalaspiden").
Simpson, G. G. 1925 D, 289.
Steinmann, G. 1907 A, 418.
1927 A, 80 ("cephalaspiden").
Stensiö, E. A. 1925 B, 161 ("cephalaspids").
Stetson, H. C. 1928 A, 228 ("cephalaspids").
Traquair, R. H. 1880 A, 147, 152.
Trouessart, E. L. 1906 A, 212.
Wiman, C. 1918 B, 91 ("cephalaspiden").
Woodward, H. 1878 A, 23.
Zittel and Koken 1911 A, 33.
Zittel and Schlosser 1923 A, 34.
Zittel and Woodward 1902 A, 54.

CEPHALASPIS Agassiz. Type *C. lyelli* Agassiz.

Hay, O. P. 1902 A, 341.
Abel, O. 1907 D, (159).
1912 F, 432, 476, 664.
1919 A, 74, figs. 36, 37.
1920 A, 321, fig. 509.
Adams, L. A. 1919 A, 121.
Agassiz, L. 1835 B, 346.
1839 A, 589, pl. i, fig. 1; pl. ii, figs. 1-9.
1844 C, 269.
Arldt, T. 1923 A, 482.
Bordage, E. 1892 A, 333.
Bridge, T. W. 1904 A, 529; figs. 318, 319.
Bronn, H. G. 1848 A, 213.
1849 A, 656.
Claypole, E. W. 1896 B, 356.
1900 A, 246.
Cunningham, J. T. 1912 A, 251.
Davis, J. W. 1880 C, 67.
Dean, B. 1909 B, 817.
Dean, Gudger, Henn 1923 A, 663.
Deeke, W. 1913 A, 88.
Dollo, L. 1910 A, 390.
Eastman, C. R. 1901 C, 328.
1902 C, 506.
1903 E, 573.
1904 C, 141.
1904 F, 703.
1905 A, 40, fig. 2.
1908 A, 58, 74.
1908 B, 31, fig. 5.
Frech, F. 1897 A, 123.
Gaskell, W. H. 1895 A, 36.
1908 A, 109, 521.
1910 A, 11.
Gaudry, A. 1896 A, 169, fig. 149.
Goodrich, E. S. 1904 A, 493.
1909 A, 201, figs. 173, 174.
Gregory, W. K. 1915 D, 319.
Heilprin, A. 1887 A, 149, 301.
Huxley, T. H. 1858 D, 502.
1861 D, 458.
1861 E, 420.
Jaekel, O. 1903 E, 90, figs. 3, 4.
1911 A, 35, fig. 21.
1926 A, 166.
Kemna, A. 1903 A, 343, 345, fig. 12.
Kiaer, J. 1924 A, 96, fig. 41.
Lankester, E. R. 1864 C, 442.
1864 D, 292.
1865 B, 517.
1868 A, 14, fig. 4.
1870 C, 43.
Lankester, E. R. 1897 A, 45.
1905 A, 258, figs. 186, 187.
Leriche, M. 1906 C, 37.
Lucas, F. A. 1901 J, 24, fig. 4.
Lütken, C. 1868 C.
MacBride, E. W. 1910 A, 17.
McMurrich, J. P. 1901 A, 406.
Mantell, G. A. 1844 A, 645.
Meek, A. 1916 A, 34.
Moodie, R. L. 1928 A, 349.
Murchison, R. T. 1854 A, 252, pl. xxvii.
Osborn, H. F. 1905 N, 235.
1916 E, 608.
1917 B, 175.
Owen, R. 1866 A, 197.
Patten, W. 1894 A, 436.
1902 A, 379, 389.
1902 B, 181.
1903 B, 829, pls. i, ii; text-figs. 5-7, 10.
1903 C, 488.
1903 D.
1904 A, 113.
1912 A, 302, 343, 350, figs. 232, 234.
Pompeckj, J. F. 1913 A, 1113, fig. 10.
Powrie, J. 1861 A, 137, 189, fig.
1870 A, 284.
Regan, C. T. 1904 A, 345.
Steinmann, G. 1908 A, 204.
Stensiö, E. A. 1927 A, 316, 326, pls. i-xii, xvi-xl, xliii, lxi-xcix, cv-cxii.
Traquair, R. H. 1899 B, 591, pl.
1900 C, 504.
Trouessart, E. L. 1906 A, 213.
Wiman, C. 1918 B, 92.
Woodward, A. S. 1906 C, 268, fig. 2.
1910 D, 31.
1920 D, 31, fig. 4.
1922 C, 57, fig. 23.
1925 A, 124.
Woodward, H. 1878 A, 6, pl. i, fig. 4; text-figs. 7, 9.
Zittel and Koken 1911 A, 33.
Zittel and Schlosser 1923 A, 34, figs. 41-43.
Zittel and Woodward 1902 A, 54.

Cephalaspis campbelltonensis Whiteaves.

Hay, O. P. 1902 A, 341.
Eastman, C. R. 1907 B, 12.
1908 A, 275.
Jaekel, O. 1895 C, 161 (C. campbelltonensis, C. whiteavesi).
Lambe, L. M. 1904 C, 15, 33, 40.

Patten, W. 1902 B, 186.
Whiteaves, J. F. 1907 B, 259.
Lower Devonian; New Brunswick.

Cephalaspis dawsoni Lankester.

Hay, O. P. 1902 A, 341.
Barkas, W. J. 1874 D, 549.
Dawson, J. W. 1870 B, 271 ("Cephalaspis").
Eastman, C. R. 1907 B, 13.
1908 A, 275.
Lambe, L. M. 1904 C, 14, 15, 33, 40.
Lankester, E. R. 1870 D, 223.
Lower Devonian; Quebec.

Cephalaspis jexi Traquair.

Hay, O. P. 1902 A, 341.
Eastman, C. R. 1907 B, 13.
Lambe, L. M. 1904 C, 15, 33, 40.
Whiteaves, J. F. 1907 B, 260.
Lower Devonian; New Brunswick.

Cephalaspis laticeps Traquair.

Hay, O. P. 1902 A, 341.
Clarke, J. M. 1913 A, 113.
Eastman, C. R. 1907 B, 16.
1908 A, 280.
Lambe, L. M. 1904 C, 16, 34, 40.
1912 A, 4.
Whiteaves, J. F. 1907 B, 248.
Upper Devonian (Scaumenac); Quebec.

Cephalaspis sp. indet.

Ami, H. M. 1901 B, 309. Lower Devonian (Knoydart); Nova Scotia.
Eastman, C. R. 1907 B, 13. Lower Devonian (Campbelltown); Nova Scotia.
1908 A, 275. Lower Devonian (Campbelltown); Nova Scotia.
Twenhofel, W. H. 1913 A, 303. Lower Devonian (Knoydart); Nova Scotia.
Whiteaves, J. F. 1907 B, 261. Lower Devonian (Campbelltown); Nova Scotia.

Subclass AZYGOSTEI Hay.

Hay, O. P. 1902 A, 341.
Dean, B. 1902 C, 703.
Jordan, D. S. 1903 A, 136.
1923 A, 86.

Superorder PLACODERMI M'Coy.

M'Coy (Ann. Mag. Nat. Hist., ser. 2, vol. ii, 1848, 6) included in this group *Bothriolepis, Asterolepis, Psammosteus, Chelyphorus,* and *Cocosteus;* and expressly excludes *Cephalaspis.* On page 278 of the same volume he includes *Pterichthys, Pamphractus, Polyphractus, Coccosteus, Asterolepis, Bothriolepis* and *Psammosteus.*

Hay, O. P. 1902 A, 342.
Abel, O. 1927 B, 314, figs. 1-3 ("panzerfische").
Adams, L. A. 1919 A, 120.
Allis, E. P. 1905 A, 492.
Arldt, T. 1907 D, 674.
1923 A, 481 ("panzerfische").
Carus, V. 1875 A, 596 (Placodermata).
Cope, E. D. 1880 U, 150 ("placodermes").
1891 B, 455 (Placodermata).
Dean, B. 1901 A, 87 ("placoderms").
1912 A, 226.
1916 A ("fishes").
Dean, Gudger, Henn 1923 A, 592, 665.
Depéret, C. 1907 B ("placodermes").
Eastman, C. R. 1901 C, 329 (Placodermata).
1906 D, 2 (Placodermata).
1907 B, 233.
Eastman, C. R. 1908 A, 160.
1917 A, 244.
Filhol, H. 1889 A, 224 ("placodermes").
Gebhardt, F. A. M. W. 1907 A, 72 ("placodermen").
Hilzheimer, M. 1913 A, 471.
Hoffmann, G. 1916 A, 491 ("panzerfische").
Hussakof, L. 1906 A, 128 (Placodermata).
Hussakof and Bryant 1919 A, 22 (Placodermata).
Moodie, R. L. 1926 A, 76.
Plate, L. 1926 A, 44 ("placodermen").
Pompeckj, J. F. 1913 A, 1110.
1926 A, 71 ("placodermen").
Regan, C. T. 1904 A, 330, 331, 340.
Schlosser, M. 1917 A, 146 ("placodermen").
Steinmann, G. 1907 A, 416.
Stromer, E. 1920 A, 9.
Traquair, R. H. 1880 A, 152, 158 (Placodermata).
Weidenreich, F. 1922 A, 44 ("placodermen").
Woodward, H. 1878 A, 19, 22.
Zittel and Koken 1911 A, 26.
Zittel and Schlosser 1923 A, 26.

Order ANTIARCHA Cope.

Hay, O. P. 1902 A, 342.
Abel, O. 1920 A, 323 (Antiarchi).
Andreae, A. 1901 B, 507.
Arldt, T. 1907 D, 282.
1912 A, 648 (Antiarchi).
1923 A, 482 ("antiarchen").
Barrell, J. 1915 B, 402.
Bridge, T. W. 1904 A, 532 (Antiarchi).
Cope, E. D. 1885 BB, 63.
1891 N, 9.
Dean, B. 1900 A, 22, seq.
1901 C, 113.
Eastman, C. R. 1907 B, 23, 32, 225.
1908 A, 56, 69, 74 (Antiarchi).
Gaskell, W. H. 1908 A, 29, 326, 343 (Antiarchi).
Goodrich, E. S. 1909 A, 206 (Pterichthyomorphi).
Gregory, W. K. 1915 D, 318.
Huene, F. 1926 A, 260.
Hussakof, L. 1906 A, 129.
Hussakof and Bryant 1919 A, 22 (Antiarchi).

Jaekel, O. 1902 A, 103 (Temnauchenia).
1903 B, 12 ("placodermen").
1903 D, 41 ("placodermen").
1903 F, 37 ("placodermen").
1906 A, 28 ("placodermen").
1906 B, 76 ("placodermen").
1906 C, 157 ("placodermen").
1906 D, 180 ("placodermen").
1907 A, 170 ("placodermen").
1909 A, 198 ("placodermen").
1911 A, 37, 44 (Placodermata).
1911 A, 38 (Asterolepidi); 47 (Coccostei).
1919 A, 73 ("placodermen").
1921 A, 233 ("placodermen").
1925 B, 170 ("placodermen").
1926 A, 172 ("placodermen").
1926 D, 71.
1927 B, 332 ("placodermen").
Jordan, D. S. 1905 A, I, 576, 581; II, 557, 586.
1907 B, 759.
1923 A, 86.
Kemna, A. 1903 A, 348 (Antiarchi).
1904 A, 24 ("placodermes").
Kiaer, J. 1924 A, 107, 114, 123 (Antiarchi); 117 (Pterichthyomorphi).
Kingsley, J. S. 1885 A, 92.
Koken, E. 1893 B, 143, 172 ("placodermen").
Leunis and Ludwig 1883 A, 777 (Placodermata).
Lütken, C. 1868 C.
1871 A, 294 ("placodermes").
Osborn, H. F. 1917 B, 165, 167, fig. (Antiarchi).
Osburn, R. C. 1907 B, 173.
Parker and Haswell 1897 A, 244.
Patten, W. 1912 A, 367.
Pompeckj, J. F. 1913 A, 1110, 1115.
Regan, C. T. 1923 B, 458 (Asterolepida).
Rosén, N. 1916 A, 11 (Antiarchi).
Schlosser, M. 1917 A, 133 (Antiarchi).
Schmalhausen, J. J. 1913 A, 76.
Simpson, G. G. 1925 D, 289 (Antiarchi).
1926 J, 173.
Stensiö, E. A. 1925 B, 189.
Stromer, E. 1920 A, 12, 16 (Antiarchi).
Traquair, R. H. 1900 C, 504 (Asterolepida).
Woodward, A. S. 1898 B, 12.
1920 D, 33 (Antiarchi).
Zittel and Koken 1911 A, 35.
Zittel and Schlosser 1923 A, 36 (Antiarchi).
Zittel and Woodward 1902 A, 56.

ASTROLEPIDÆ Traquair.

Traquair, R. H. 1888 C, 485.
Unless otherwise indicated the authors, as quoted, write the name of this family Asterolepidæ.

Hay, O. P. 1902 A, 342.
Abel, O. 1907 D, (167).
1908 D, (211), ("asterolepiden").
1912 F, 596 ("asterolepiden").
1919 A, 88.
Barrell, J. 1915 B, 393.
Bridge, T. W. 1904 A, 534.
Dean, B. 1902 C, 703 ("pterichthyids").
1912 A, 226 ("pterichthyids").
Dean, Gudger, Henn 1923 A, 664.
Eastman, C. R. 1902 C, 507 ("Pterichthydæ").
1904 C, 141, 143.
1906 D, 3.
1907 B, 23, 33, 225.
1908 A, 56, 75 ("asterolepids").
Gebhardt, F. A. M. W. 1907 A, 73 ("asterolepiden").
Goodrich, E. S. 1909 A, 209.
Hoernes, R. 1886 A, 546 (Pterichthyidæ).
Hoffmann, G. 1911 A, 285 ("asterolepiden").
Hussakof, L. 1906 A, 131.
Jaekel, O. 1902 A, 106, 113 ("asterolepiden").
1903 D, 41, 58 ("asterolepiden").
Jaekel, O. 1903 F, 39 ("pterichthyiden").
1906 D, 187 ("asterolepiden").
1911 A, 37 ("asterolepiden"; Pterichthyi).
1919 A, 101 ("asterolepiden").
1921 A, 226 ("asterolepiden").
1925 B, 166 ("asterolepiden").
1926 A, 168 ("asterolepiden").
Jordan, D. S. 1905 A, I, 576; II, 557.
1907 B, 759.
1923 A, 86.
Kemna, A. 1904 A, 52 ("astérolépidés").
Kiaer, J. 1924 A, 116 (Asterolepididæ); 117 (Pterichtyidæ).
Lankester, E. R. 1897 A, 45.
Osborn, H. F. 1902 H, 749 ("asterolepids").
Patten, W. 1902 A, 392 (Pterichydæ).
1902 B, 180 (Pterichthydæ).
1903 D, 29.
Pompeckj, J. F. 1913 A, 1115.
Regan, C. T. 1904 A, 340.
Schlosser, M. 1917 A, 133 ("asterolepiden").
Steinmann, G. 1907 A, 418.
Weidenreich, F. 1922 A, 44 (Asterolepis).
Zittel and Koken 1911 A, 37.
Zittel and Schlosser 1923 A, 36.
Zittel and Woodward 1902 A, 56.

ASTROLEPIS Eichwald. Type *A. ornata* Eichwald.

Unless otherwise indicated, the authors, as quoted, write this name *Asterolepis*.

Hay, O. P. 1902 A, 342.
Abel, O. 1912 F, 598.
1919 A, 90, fig. 51.
1927 A, (31).
Arldt, T. 1923 A, 482.
Barkas, W. J. 1874 D, 549.
Bronn, H. G. 1849 A, 121.
Chapman, F. 1916 A, 211.
Darton, N. H. 1906 A, 563.
Delafontaine, M. 1877 A, 267.
Dean, Gudger, Henn 1923 A, 664.
Eastman, C. R. 1903 E, 574.
1907 B, 39, 225.
1908 A, 82.
Eichwald, E. 1840 B, 425.
Frech, F. 1897 A, 82.
Gaskell, W. H. 1895 A, 36 (Astrolepis).
1908 A, 326, 342.
Gebhardt, F. A. M. W. 1907 A, 81.
Goodrich, E. S. 1909 A, 506.

Heilprin, A. 1887 A, 302.
Hoffmann, G. 1909 A, 491, figs. 1-3.
1911 A, 285.
Hussakof, L. 1906 A, 134.
1908 C, 311.
Jaekel, O. 1902 A, 110.
1903 D, 45, figs. 3-5, 7, 8.
1903 E, 86.
1903 F, 35.
1919 A, 102, fig. 15.
1926 A, 164, 166.
Jordan, D. S. 1919 B, 206 (Astrolepis).
Miller, J. 1851 A, 92.
1869 A, 384.
Pompeckj, J. F. 1913 A, 1115.
Traquair, R. H. 1880 A, 155.
1904 A, 91.
Woodward, A. S. 1900 H, 1.
1915 B, lxiv.
Zittel and Koken 1911 A, 38.
Zittel and Schlosser 1923 A, 38, figs. 48, 49.
Zittel and Woodward 1902 A, 57.

Astrolepis clarkei Eastman.

Eastman, C. R. 1907 B, 40, pl. vii, figs. 7, 8 (Asterolepis).
Eastman, C. R. 1907 B, 13, 225 (Asterolepis).
1908 A, 83, 275 (Asterolepis).
Williams and Breger 1916 A, 293, pl. xxii, fig. 19 (Asterolepis).
Lower Devonian (Chapman); Maine.

Astrolepis incisa Woodward.

Woodward, A. S. 1900 H, 6, pl. i, figs. 11-13 (Asterolepis).
Upper Devonian; East Greenland.

Pterichthyodes Bleeker. Type *Pterichthys milleri* Agassiz.

Unless otherwise indicated the authors, as cited, use the name *Pterichthys*.

Bleeker, P. 1839, Tentamen, 11 (Pterichthyodes).
Hay, O. P. 1902 A, 343 (Pterichthyodes).
Abel, O. 1907 D (160).
1908 E, 413, fig. 5.
1909 D, (226).
1912 B, 76, fig. 26.
1912 F, 445, 598.
1919 A, 88, figs. 49, 50.
1920 A, 323, fig. 513.
Agassiz, L. 1844 C, 269.
Allis, E. P. 1905 A, 493.
Arldt, T. 1923 A, 482.
Barkas, W. J. 1874 D, 552.
Böker, H. 1927 A, 36.
Bordage, E. 1892 A, 333, fig. 4.
Bridge, T. W. 1904 A, 533.
Bronn, H. G. 1848 B, 1051.
1849 A, 656.
Cunningham, J. T. 1912 A, 250.
Davis, J. W. 1880 C, 67.
Dean, Gudger, Henn 1923 A, 664.
Deecke, W. 1913 A, 88.
Delafontaine, M. 1877 A, 268.
Eastman, C. R. 1898 E, 183.
1903 E, 574.
1904 C, 142.
1905 A, 40, fig. 1.
1906 A, 141.
1906 D, 1.
1907 B, 32, 233.
1908 A, 57, 75, 76, figs. 9-11.
Frech, F. 1897 A, 123.
Gadow, H. 1910 A, 28.
Gaskell, W. H. 1895 A, 36.
1908 A, 533.
Gaudry, A. 1896 A, 19, fig. 25.
Goodrich, E. S. 1909 A, 208, fig. 161.
Gregory, W. K. 1922 A, 3.
Heilprin, A. 1887 A, 149, 301.
Hoernes, R. 1886 A, 547.
Hoffmann, G. 1909 A, 491.
1911 A, 287.
Hussakof, L. 1906 A, 131.
Huxley, T. H. 1858 D, 505, 515.
1861 D, 449, fig. 19.
Jaekel, O. 1902 A, 110.
1903 B, 12.
1903 D, 41, 56.
1911 A, 38.
1919 A, 101 (Pterichthys).
Jordan, D. S. 1903 A, 136.
1905 A, i, 576; ii, 588 (Pterichthyodes).
1919 B, 209 (Pterichthyodes).
Kemna, A. 1903 A, 343.
1904 A, 61.
Kiaer, J. 1924 A, 110.
Koken, E. 1893 B, 143, 174.
Koschkaroff, D. N. 1906 A, 298.
Lankester, E. R. 1897 A, 45.
1905 A, 252, figs. 183, 184.
Longmuir, —. 1860 A, 263.
Lucas, F. A. 1901 J, 25, fig. 5.
Lütken, C. 1868 C.
MacBride, E. W. 1910 A, 18.
Mantell, G. A. 1844 A, 646, fig. 135.
Miller, H. 1851 A, 91.
1857 A, 98, fig. 57.
Murchison, R. I. 1841 A, 99.
1854 A, 251, fig. 47.
Osborn, H. F. 1905 N, 235.
1916 E, 606, fig. 14.
1917 B, 166, 170, fig.
Patten, W. 1902 A, 379, 389.
1903 A, 223.
1903 D.
1912 A, 343.
Perrier, E. 1920 A, 272.
Pompeckj, J. F. 1913 A, 1114, fig. 12.
Regan, C. T. 1904 A, 34, fig. 4.
Schuchert, C. 1915 A, 686, fig. 408.
Schuchert and Levene 1927 A, 267, fig.
Stromer, E. 1905 D, 315.
Traquair, R. H. 1880 A, 150, 155.
1900 C, 504.
1904 A, 94.
Woodward, A. S. 1897 C, 379.
1906 C, 269, fig. 3.
1915 B, lxiv.
1920 D, 33.
1922 C, 59, fig. 54.
Woodward, H. 1878 A, 14, pl. i, fig. 5.

Zittel and Koken 1911 A, 37.
Zittel and Schlosser 1923 A, 37, figs. 46, 47.

Bothriolepis Eichwald.

Hay, O. P. 1902 A, 343.
Abel, O. 1907 D, (166).
1912 F, 561, 598.
Adams, L. A. 1919 A, 122, fig. 3.
Allis, E. P. 1905 A, 493.
Barkas, W. J. 1874 D, 548 (Stenacanthus); 549 (Bothriolepis).
Bordage, E. 1892 A, 334, fig. 4.
Bronn, H. G. 1848 A, 172.
1849 A, 655.
Clarke, J. M. 1911 A, 128.
Claypole, E. W. 1883 C, 281.
Dean, B. 1908 A, 202.
1912 A, 226.
Dean, Gudger, Henn 1923 A, 664.
Eastman, C. R. 1903 E, 574.
1906 A, 141.
1907 B, 32, 42.
1908 A, 79, 83.
Eichwald, E. 1840 B, 425 (Bothryolepis).
Frech, F. 1897 A, 123.
Gaskell, W. H. 1895 A, 36.
1908 A, 520.
1910 A, 12.
Gebhardt, F. A. M. W. 1907 A, 81.
Goodrich, E. S. 1909 A, 206, 209.
Gregory, W. K. 1915 D, 319.
1917 A, 378, fig. 5.
1922 A, 3.
Heilprin, A. 1887 A, 302.
Hoffmann, G. 1909 A, 492.
1911 A, 285, figs. 24, 25.
Hussakof, L. 1906 A, 131, 143.
Hussakof and Bryant 1919 A, 23.
Huxley, T. H. 1861 D, 436.
Jaekel, O. 1903 D, 48.
1926 A, 164.
Kemna, A. 1904 A, 19.
Kingsley, J. S. 1925 A, 90, fig. 94.
Koken, E. 1893 B, 175.
Lambe, L. M. 1904 C, 16.
Lewis, F. T. 1907 A, 657.
Lull, R. S. 1917 B, 469.
Moodie, R. L. 1915 I, 141, 165, figs. 1, 2.
1920 D, 14.
1923 B, 292.
1926 A, 76, 84.
Osborn, H. F. 1916 E, 603, fig. 10.
1917 B, 165, 167, 170, fig.
Owen, R. 1866 A, 378.
Patten, W. 1903 A, 223.
1903 C, 488.
1903 D.
1904 A, 113, figs. 1-6.
1905 A, 297.
1905 B, 140.
1906 A, 283.
Pompeckj, J. F. 1913 A, 1110, 1115.
Roberts, G. E. 1863 A, 389.
Stensiö, E. A. 1921 A, 44.
Traquair, R. H. 1904 A, 107.
1906 A, 119, pls. xxvii-xxxi.
1908 B, 326.
Zittel and Woodward 1902 A, 56.
No American species of this genus has yet been discovered.

Type *B. prisca* Eichwald.

Watson and Day 1916 A, 37.
Wiman, C. 1918 B, 90.
Woodward, A. S. 1897 C, 379.
1900 H, 9.
1913 B, 82, pl. x, fig. 3.
1915 B, lxiv.
1917 G, lxxx.
1920 D, 34.
Zittel and Koken 1912 A, 39.
Zittel and Schlosser 1923 A, 39.
Zittel and Woodward 1902 A, 58.

Bothriolepis canadensis Whiteaves.

Hay, O. P. 1902 A, 343.
Abel, O. 1907 D, (160, 166).
1912 F, 598.
1919 A, 91, fig. 52.
Bridge, T. W. 1904 A, 534.
Clarke, J. M. 1913 A, 113, 2 figs.
Claypole, E. W. 1883 C, 278 (Pterichthys).
Cope, E. D. 1885 BB, 63.
1891 N, 9, fig. 2.
Eastman, C. R. 1904 B, 254.
1907 B, 16, 43, text-figs. 10-12.
1908 A, 84, 280, figs. 12-14.
1917 A, 240.
Goodrich, E. S. 1909 A, 206, fig. 180.
Hoffmann, G. 1911 A, 300, text-figs. 16, 23.
1916 A, 491, figs. 1-4.
Hussakof, L. 1906 A, 131, fig. 14.
Hussakof and Bryant 1919 A, 23.
Jaekel, O. 1903 D, 42, 57.
Jordan, D. S. 1908 B, 807.
Kiaer, J. 1915 A, 41, 42.
Lambe, L. M. 1904 C, 14, 16, 34, 40.
1912 A, 4.
Moodie, R. L. 1923 B, 320, pl. lxiv.
1926 A, 67, pl. vi, text-fig. 1.
Patten, W. 1905 B, 140.
1912 A, 483, figs. 247-257.
Rogers, A. F. 1924 A, 546.
Stromer, E. 1912 A, 40, fig. 52.
Traquair, R. H. 1904 A, 112, figs. 57-59.
Whiteaves, J. F. 1907 B, 249, pls. i, ii.
Woodward, A. S. 1900 H, 9.
Upper Devonian (Scaumenac); Quebec.

Bothriolepis coloradensis Eastman.

Eastman, C. R. 1904 B, 255, figs. 1, 4.
Cross, W. 1905 C, 4 ("Bothriolepis." This species?).
1910 A, 5.
Eastman, C. R. 1907 B, 20, 53.
1908 A, 94, 285.
1915 A, 280.
1917 A, 240.
Upper Devonian (Elbert); Colorado.

Bothriolepis hydrophila Agassiz.

Agassiz, L. 1844 A, 5, 21, pl. iv, figs. 4-7 (Pamphractus hydrophilus); 21 (P. andersoni); 134, pl. xxxi, fig. 6 (Homothorax flemmingii).

Kiaer, J. 1915 A, 39, 41, 54, pl. vii, figs. 1-6 (This species?).
Miller, H. 1848, in Egerton, P. G., 1848 A, 312, 314 (Pterichthys).
Powrie, J. 1862 A, 435 (Pterichthys).
Traquair, R. H. 1888 B, 510.
1888 C, 500, pl. xviii, figs. 4, 5.
Woodward, A. S. 1891 A, 230, pl. vi, fig. 9, text-figs. 35.
Upper Devonian (Old Red); Scotland. Upper Devonian?; Ellesmere Land.

Bothriolepis leidyi Newb.

Newberry, J. S. 1889 A, 109, 111, pl. xviii, fig. 2; pl. xx, figs. 1-5.
Hay, O. P. 1902 A, 344 (B. nitida part).
Clarke and Ruedmann 1903 A, 765 (This species?).
Claypole, E. W. 1903 A, 321.
Cross, W. 1905 C, 4 ("Bothriolepis." This species?).
Eastman, C. R. 1904 B, 257 (This species?).
1907 B, 50 (Syn. of B. nitida).
Upper Devonian (Catskill); Pennsylvania, New York.

Bothriolepis minor Newb.

Hay, O. P. 1902 A, 343.
Clarke and Ruedmann 1903 A, 965.
Claypole, E. W. 1903 A, 321.
Eastman, C. R. 1907 B, 20, 52; fig. 13.
1908 A, 93, 287, 289.
Hussakof, L. 1908 A, 5.
Upper Devonian (Chemung); Pennsylvania: (Catskill); New York.

Bothriolepis nitida (Leidy).

Hay, O. P. 1902 A, 344.
Barkas, W. J. 1874 D, 548 (Stenacanthus).
Claypole, E. W. 1903 A, 320 (Stenacanthus niticans).
Eastman, C. R. 1907 B, 22, 50; pl. iii, fig. 4; pl. vii, fig. 1.
1908 A, 92, 289.
1915 A, 280.
1917 A, 240.
Hussakof, L. 1908 A, 5.
Hussakof and Bryant 1919 A, 23.
Upper Devonian (Chemung, Catskill); Pennsylvania, New York.

Bothriolepis traquairi Bryant.

Bryant, W. L. 1924 A, 54, pls. i, ii.
Upper Devonian (Scaumenac); Quebec.

Bothriolepis sp. indet.

Abel, O. 1926 B, 217. Upper Devonian, Grand Canyon, Arizona.
Cross, W. 1905 A, 3. Devonian (Elbert); Colorado.
Kiaer, J. 1915 A, 43 (This genus?). Upper Devonian; Ellesmere Land.
Schuchert, C. 1918 A, 361. Devonian; Arizona.

Order COCCOSTEOMORPHI Goodrich.

Goodrich, E. S. 1909 A, 258.
Unless otherwise indicated, the authors, as cited, apply to this group the name Arthrodira.
Hay, O. P. 1902 A, 344.
Abel, O. 1912 F, 439, 440, 487.
1919 A, 92.
1920 A, 323.
Adams, L. A. 1919 A, 124.
Arldt, T. 1907 D, 282.
1912 A, 648.
1923 A, 482 ("arthrodiren").
Barrell, J. 1915 B, 402.
Berry, E. W. 1925 A, 358.
Branson, E. B. 1918 A, 89.
Bridge, T. W. 1904 A, 535, 731.
Bryant, W. L. 1926 B, 257.
Cope, E. D. 1891 N, 14.
Dean, B. 1900 A, 22 (Subclass of Arthrognathi).
1901 C, 110 et seq. (Subclass of Arthrognathi).
1907 A, 46 ("arthrodires").
1908 A, 202.
1909 C, 282.
1914 A, 59.
Dean, Gudger, Henn 1923 A, 589, 611, 664, 665.
Dollo, L. 1906 B, 136 ("arthrodères").
1907 B, 97, 106 ("arthrodères").
Eastman, C. R. 1900 G, 287.
1901 C, 329 ("arthrodires").
1904 C, 141 ("arthrodires").
1905 A, 46, 138 ("arthrodires").
1906 A, 131, 138 ("arthrodires").
Eastman, C. R. 1906 B, 290 ("arthrodires").
1906 D, 1.
1907 A, 211 ("arthrodires").
1907 B, 23, 89, 225.
1908 A, 69, 157, 158.
1917 A, 244 ("arthrodires").
Goodrich, E. S. 1904 A, 494 (Arthrodira).
Gregory, W. K. 1907 D, 447.
1915 D, 318, 342.
1920 A, 219.
Hennig, E. 1920 B, 113.
Howes, G. B. 1902 A, 525.
Huene, F. 1926 A, 260.
Hussakof, L. 1906 A, 105.
1908 C, 312.
1911 B, 123.
Hyde, J. E. 1926 A, 501 ("arthrodires").
Jaekel, O. 1903 D, 57.
1911 A, 47 (Coccostei).
1919 A, 75.
1925 B, 167.
1927 B, 332, 337.
Jordan, D. S. 1903 A, 136.
1905 A, i, 581, 585, 612; ii, 557.
1907 B, 238, 245, 760.
1923 A, 88.
Kemna, A. 1904 A, 65 ("arthrodiriens").
Keyes, C. A. 1922 A, pl. iii.
Kiaer, J. 1924 A, 123.
1928 A, 130 ("arthrodires").
Kingsley, J. S. 1925 A, 118.
Meek, A. 1916 A, 35.
Moodie, R. L. 1915 I, 138 ("arthrodires").

Moodie, R. L. 1926 A, 73, 80.
Osborn, H. F. 1916 E, 601 ("arthrodires").
1917 B, 166, 167, 292, fig.
Osburn, R. C. 1907 B, 173.
Patten, W. 1912 A, 386, 388.
Pompeckj, J. F. 1913 A, 1116, 1119.
Regan, C. T. 1923 B, 458.
Reynolds, S. H. 1897 A, 70.
Sauvage, H. E. 1890 B, 86 (Arthropodira).
Schlosser, M. 1917 A, 132, 133, 146.
Schuchert, C. 1915 A, 688.
Sewertzoff, A. N. 1923 B.
Simpson, G. G. 1926 J, 173.
Stensiö, E. A. 1925 A, 176, 182, 223 (arthrodires").
Stensiö, E. A. 1925 B, 164, 187 ("arthrodirids").
1927 A, 32.
Stromer, E. 1912 A, 35, 48.
1920 A, 15, 16.
Thevenin, A. 1910 A, 35 ("arthrodires").
Williston, S. W. 1912 E, 258.
Woodward, A. S. 1898 B, 64.
1915 B, lxx.
1920 D, 34.
1922 B, 30.
1922 C, 79.
Zittel and Koken 1911 A, 78.
Zittel and Schlosser 1923 A, 39.
Zittel and Woodward 1902 A, 58.

Suborder MACROPETALICHTHYIFORMES, new name.

Dean, B. 1900 A, 22 (Anarthrodira).
1901 C, 110, seq. (Anarthrodira).
1909 C, 281 (Anarthrodira).
Eastman, C. R. 1900 G, 287 (Anarthrodira).
Goodrich, E. S. 1909 A, 262 (Anarthrodira).
Gregory, W. K. 1907 D, 447 (Anarthrodira).
Hussakof, L. 1906 A, 135 (Anarthrodira).
Jaekel, O. 1903 D, 58 (Anarthrodira).
Jordan, D. S. 1905 A, i, 584; ii, 557 (Anarthrodira).
Pompeckj, J. F. 1913 A, 1119 (Anarthrodira).

MACROPETALICHTHYIDÆ Eastman.

Hay, O. P. 1902 A, 349.
Dean, B. 1901 C, 120 (Subcl. Anarthrodira; order Stegothalami).
Eastman, C. R. 1907 B, 23, 99.
1908 A, 167.
Gebhardt, F. A. M. W. 1907 A, 73 ("macropetalichthyiden").
Goodrich, E. S. 1909 A, 262.
Gregory, W. K. 1907 D, 447.
Hennig, E. 1907 B, 591.
Jaekel, O. 1902 A, 112 ("macropetalichthyiden").
1903 D, 58 ("macropetalichthyiden").
1903 F, 39 ("macropetalichthyiden").
1926 A, 181 ("macropetalichthyiden").
Jordan, D. S. 1907 B, 760.
1923 A, 88.
Stensiö, E. A. 1925 B, 92, 164 ("macropetalichthyids").

MACROPETALICHTHYS Norw. and Owen.

Hay, O. P. 1902 A, 349.
Allis, E. P. 1905 A, 491.
Arldt, T. 1923 A, 482, 493.
Barkas, W. J. 1874 D, 551.
Bryant, W. L. 1926 B, 256.
Dames, W. 1899 G, 556.
Dean, B. 1900 A, 26.
1901 B, 108.
1901 C, 114, et seq.
1907 A, 48.
Dean, Gudger, Henn 1923 A, 664.
Deecke, W. 1913 A, 89.
Eastman, C. R. 1898 E, 184.
1900 G, 288.
1901 C, 329.
1906 A, 141.
1906 D, 12.
1907 B, 100, 193, 231.
1908 A, 168.
Gregory, W. K. 1915 D, 320.
Heilprin, A. 1887 A, 149.
Hennig, E. 1907 B, 584.
Hussakof, L. 1906 A, 135.
1908 C, 312.
Jaekel, O. 1902 A, 113.
1911 A, 46, fig. 32.
1919 A, 75.
1921 A, 233.
1926 A, 161.
1927 B, 336.
Jordan, D. S. 1923 A, 88.

Type *M. rhapheidolabis* Norw. and Owen.

Kiaer, J. 1915 A, 15.
Kayser, E. 1880 B, 678 (Placothorax a syn.).
Newberry, J. S. 1873 G, 145.
Pompeckj, J. F. 1913 A, 1118.
Stensiö, E. A. 1925 B, *passim*.
Trouessart, E. 1898 B, 7.
Woodward, A. S. 1890 F, 146.
1917 G, lxxx.
Zittel and Koken 1911 A, 83.
Zittel and Schlosser 1923 A, 43.
Zittel and Woodward 1902 A, 58.

Macropetalichthys rhapheidolabis Norw. and Owen.

Hay, O. P. 1902 A, 349 (M. rhapheidolabis, M. sullivanti).
Bronn, H. G. 1848 C (Pterichthys norwoodi, P. norwoodanus).
Claypole, E. W. 1896 B, 354 (M. sullivanti).
1903 A, 312, 319 (M. rhapheidolabis, M. sullivanti).
Dames, W. 1899 G, 556, fig. (M. sullivanti).
Eastman, C. R. 1907 B, 14, 103, 231, pl. ix, fig. 5; pl. xi; text-figs. 19-21.
1908 A, 168, 278, fig. 24.
Hussakof, L. 1908 A, 16.
Hussakof and Bryant 1919 A, 10, 25.
Jaekel, O. 1926 A, 161-184, figs. 1-3.
Kiaer, J. 1915 A, 11, 13, fig. 2 (M. rapheidolabis).

Lambe, L. M. 1904 C, 16, 34, 42 (M. sullivanti (This fish).
Newberry, J. S. 1870 E, 17 (M. sullivanti).
1874 H, 192 (M. sullivanti).
Orton, E. 1878 A, 625, 628 (M. sullivanti).
Stauffer, C. R. 1909 A, 169.
Stensiö, E. A. 1925 B, 91-198, pls. xix-xxviii, xxx, text-figs. 1-13, 15.
Trouessart, E. 1898 B, 7 (M. rhapheidolabis, M. sullivanti).
Whiteaves, J. F. 1877 A, 319 (M. sullivanti).
Middle Devonian (Columbus and Delaware); Ohio, Indiana: (Onondaga); New York: Devonian; Ontario and James Bay, Canada.

Macropetalichthys schei Kiaer.

Kiaer, J. 1915 A, 9, pl. i, figs. 1-6; text-figs. 1, 2.
Upper Devonian?; Ellesmere Land.

ASTEROSTEIDÆ A. S. Woodward.

Hay, O. P. 1902 A, 349.
Dean, B. 1901 C, 121.
Gregory, W. K. 1907 D, 447.
Jordan, D. S. 1907 B, 760.
1923 A, 88.
Zittel and Koken 1911 A, 84.
Zittel and Schlosser 1923 A, 45.

ASTEROSTEUS Newb. Type *A. stenocephalus* Newb.

Hay, O. P. 1902 A, 349.
Arldt, T. 1923 A, 493.
Dean, Gudger, Henn 1923 A, 664.
Eastman, C. R. 1907 B, 112, 193, 225.
Zittel and Woodward 1902 A, 58.
Eastman, C. R. 1907 B, 14, 113.
1908 A, 278.
Hussakof, L. 1908 A, 5.
Newberry, J. S. 1874 H, 192.
Orton, E. 1878 A, 626.
Stauffer, C. R. 1909 A, 169.
Zittel and Schlosser 1923 A, 45.
Middle Devonian (Columbus and Delaware); Ohio: (Onondaga?); New York.

Asterosteus stenocephalus Newb.

Hay, O. P. 1902 A, 349.
Claypole, E. W. 1903 A, 319.

Suborder COCCOSTEIFORMES, new name.

Dean, B. 1901 C, 120, 122 (Arthrothoraci).
Goodrich, E. S. 1909 A, 261 (Arthrothoraci).
Gregory, W. K. 1907 D, 447 (Arthrothoraci).
Hussakof, L. 1906 A (Arthrothoraci).
Jaekel, O. 1903 D, 58.
1911 A, 47 (Coccostei).
Jordan, D. S. 1905 A, i, 586; ii, 557 (Arthrothoraci).
1907 B, 760 (Arthrothoraci).

PHYLLOLEPIDÆ A. S. Woodward.

Hay, O. P. 1902 A, 349.
Jordan, D. S. 1923 A, 89.
Zittel and Koken 1911 A, 84.
A family of doubtful standing.

GLYPTASPIS Newb. Type *G. verrucosus* Newb.

Hay, O. P. 1902 A, 349.
Eastman, C. R. 1907 B, 147.
1908 A, 181.
Hussakof, L. 1906 A, 148.
Hussakof and Bryant 1919 A, 92.
Swartz, C. K. 1913 A, 700.
A genus of uncertain relationships.

Glyptaspis eastmani Swartz.

Swartz, C. K. 1913 A, 700, pl. lxxiii, figs. 1-3.
Hussakof and Eastman 1919 A, 104 (Syn.? of Holonema rugosum).
Upper Devonian (Jennings); Maryland.

Glyptaspis verrucosa Newb.

Hay, O. P. 1902 A, 349.
Claypole, E. W. 1896 B, 351 ("Glyptaspis").
1903 A, 320.
Eastman, C. R. 1907 B, 19, 147, 230.
1908 A, 285.
Hussakof, L. 1908 A, 15.
Hussakof and Bryant 1919 A, 103.
Upper Devonian (Cleveland); Ohio.

Glyptaspis sp. indet.

Branson, E. B. 1922 A, 42, 44, 128, pl. xxxi, fig. 3. Upper Devonian (Snyder Creek); Missouri.

PHYLLOLEPIS Agassiz. Type *P. concentrica* Agassiz.

Hay, O. P. 1902 A, 349.
Barkas, W. J. 1874 D, 552.
Bryant, W. L. 1926 B, 270.
Eastman, C. R. 1907 B, 156.
1908 A, 207.
Hussakof and Bryant 1919 A, 21.
Stensiö, E. A. 1927 A, 329, fig. 91.
Woodward, A. S. 1890 F, 147.
1920 D, 31, fig. 3.
1921 A, 179, fig. 20.
Zittel and Schlosser 1923 A, 31, fig. 37.
A genus of uncertain position. A. S. Woodward (1921 A, 179) refers it to the Heterostraci?; Zittel and Schlosser to the Drepanaspidæ.

Phyllolepis delicatula Newb.

Hay, O. P. 1902 A, 349.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 21, 157.

Eastman, C. R. 1908 A, 207, 288.
Hussakof, L. 1908 A, 24.
Upper Devonian (Chemung); Pennsylvania.

Phyllolepis elegans Hussakof and Bryant.

Hussakof and Bryant 1919 A, 21, pl. xxxii, fig. 2.
Upper Devonian (Portage); New York.

HOLONEMA Newb. Type *H. rugosum* (Claypole).

Hay, O. P. 1902 A, 350.
Dean, Gudger, Henn 1923 A, 664.
Eastman, C. R. 1908 A, 181, 206.
1908 B, 156.
Traquair, R. H. 1908 B, 324.
Zittel and Koken 1911 A, 84.
Zittel and Schlosser 1923 A, 31.
A genus of uncertain family position.

Holonema abbreviatum (Eastman).

Eastman, C. R. 1907 B, 147, 229, pl. xiii (Glyptaspis).
Eastman, C. R. 1908 A, 282 (Glyptaspis).
Hussakof, L. 1908 A, 15 (Glyptaspis).
Hussakof and Bryant 1919 A, 13, 17, 18, 102, pl. xxxi.
Upper Devonian (Genesee, Portage); New York: (Genesee); Kentucky.

Holonema horridum Cope.

Hay, O. P. 1902 A, 350.
Eastman, C. R. 1907 B, 21, 156.
Eastman, C. R. 1908 A, 206, 288.
Hussakof, L. 1908 A, 23.
Upper Devonian (Chemung); Pennsylvania.

Holonema rugosum (Claypole).

Hay, O. P. 1902 A, 350.
Claypole, E. W. 1903 A, 321.
Eastman, C. R. 1907 B, 21, 156.
1908 A, 206, 288, 289.
Hussakof, L. 1908 A, 23.
Hussakof and Bryant 1919 A, 104, pl. xxxii, fig. 1.
Merrill, G. P. 1907 A, 11 (H. rugosa).
Traquair, R. H. 1908 B, 324, fig. 3.
Upper Devonian (Chemung); Pennsylvania, New York: (Catskill); New York: Middle Devonian; Wisconsin.

Holonema sp. indet.

Hussakof and Bryant 1919 A, 104. Middle Devonian; Wisconsin.

ACANTHASPIDÆ Woodward.

Woodward, A. S. 1891 F, 3.
Jaekel, O. 1925 B, 168 ("acanthaspiden").

ACANTHASPIS Newb. Type *A. armatus* Newb.

Hay, O. P. 1902 A, 332.
Claypole, E. W. 1903 A, 313.
Eastman, C. R. 1904 C, 141.
1906 D, 17.
1907 B, 117, 193, 225.
1908 A, 144.
Gebhardt, F. A. M. W. 1907 A, 80.
Goodrich, E. S. 1909 A, 261, fig. 231.
Hussakof, L. 1906 A, 132, fig. 16.
Hussakof and Bryant 1919 A, 98.
Jaekel, O. 1903 D, 54.
1907 A, 175.
1926 A, 182.
Kemna, A. 1903 A, 346.
Osborn, H. F. 1917 B, 167.
Pompeckj, J. F. 1913 A, 1119.
Regan, C. T. 1904 A, 342.
Stromer, E. 1905 D, 315.
Woodward, A. S. 1891 F, 3, pls. i, ii.
A genus of uncertain systematic position.

Acanthaspis armata Newb.

Hay, O. P. 1902 A, 332.
Claypole, E. W. 1903 A, 321.
Eastman, C. R. 1907 B, 14, 117, 198, pl. ii, fig. 2.
1908 A, 145, 277, pl. i, fig. 14.
Hussakof, L. 1908 A, 22.
Hussakof and Bryant 1919 A, 10, 17, 18, 99, text-figs. 33-35.
Jaekel, O. 1907 A, 175, fig. 4.
Newberry, J. S. 1874 H, 192.
Orton, E. 1878 A, 626.
Stauffer, C. R. 1909 A, 169.
Weller, S. 1902 A, 427.
Woodward, A. S. 1891 F, 3.
Middle Devonian (Onondaga); New York: (Columbus and Delaware); Ohio.

Acanthaspis sp. indet.

Hussakof and Bryant 1919 A, 13, 100, pl. xxviii, fig. 4. Upper Devonian (Genesee); New York: 19, 101, text-fig. 36; Upper Devonian (Portage); New York.

PTYCTODONTIDÆ Woodward.

Hay, O. P. 1902 A, 322.
Abel, O. 1912 F, 439, 487.
1919 A, 103.
Arldt, T. 1923 A, 490 ("ptyctodontiden").
Bridge, T. W. 1904 A, 468.
Dean, B. 1906 B, 136 ("ptyctodontids").
Dollo, L. 1906 B, 135 ("ptyctodontes").
Dollo, L. 1907 B, 97 ("ptyctodontes").
Eastman, C. R. 1904 E, 295.
1907 B, 23, 67, 193.
1908 A, 120, 149.
1915 B, 440 ("ptyctodonts").
1917 A, 242.
Goodrich, E. S. 1909 A, 179.

Gregory, W. K. 1907 D, 447.
Hay, O. P. 1901 B, 68.
Jaekel, O. 1903 G, 391.
1906 D, 180 ("rhynchodonten").
1927 B, 337 ("ptyctodonten").
Jordan, D. S. 1905 A, i, 566.
1907 B, 759.
1923 A, 105.
Petronievics, B. 1919 A, 414 ("ptyctodontes").
Pompeckj, J. F. 1913 A, 1119, 1131.
Sauvage, H. E. 1899 A, 6 ("ptyctodontidés").
Schlosser, M. 1917 A, 133, 147 ("ptyctodontiden").
Stensiö, E. A. 1925 B, 164, 181 ("ptyctodontids").
Stromer, E. 1905 H, 216.
1912 A, 25.
Teller, E. E. 1906 A, 164.
Zittel and Koken 1911 A, 83.
Zittel and Schlosser 1923 A, 44.
Zittel and Woodward 1902 A, 45.

PTYCTODUS Pander.

Hay, O. P. 1902 A, 322.
Bridge, T. W. 1904 A, 468.
Dean, B. 1906 B, 134, 150, figs. 116, 126.
1912 A, 226.
Dollo, L. 1907 B, 104.
Eastman, C. R. 1904 E, 295.
1907 B, 70, 193, 233.
1908 A, 119, 120, 133.
1917 A, 242.
Hay, O. P. 1901 B, 68.
Huene, F. 1900 A, 65.
Hussakof and Bryant 1919 A, 107, 108.
Jaekel, O. 1901 A, 560.
1903 G, 391.
1906 D, 182.
Jordan, D. S. 1923 A, 105.
Lambe, L. M. 1904 C, 16.
Leriche, M. 1925 B, 86.
Sauvage, H. E. 1899 A, 7.
Teller, E. 1906 A, 162.
Weller, S. 1902 A, 427.
Zittel and Koken 1911 A, 83.
Zittel and Woodward 1902 A, 45.

Ptyctodus calceolus Newb. and Worth.

Hay, O. P. 1902 A, 322.
Branson, E. B. 1914 A, 64, pl. iii, figs. 3, 4.
1918 A, pl. iv, fig. 16.
1922 A, 6, 22, 44, 45, 126, pl. xxxi, figs. 1, 2.
Calvin, S. 1897 B, 18.
Cleland, H. F. 1911 A, 150, pl. xlviii, figs. 1-17.
Dean, B. 1906 B, fig. 116 (*fide* Branson).
Eastman, C. R. 1904 D, 298.
1907 B, 15, 16, 17, 20, 71.
1908 A, 48, 49, 128, 133, 277, 281, 286, pl. v, figs. 1-17.
Hussakof and Bryant 1919 A, 15, 17, 108, pl. xxxiv; pl. xxxvi, figs. 1, 2, 10; pl. xxxvii, fig. 9.
Lambe, L. M. 1904 C, 34, 42.
Norton, W. H. 1906 A, 356.
Shepard, E. M. 1898 A, 79.
Tyrrell, J. B. 1892 A, 209.
Udden, J. A. 1899 A, 289, 292, 294, 295, 298, 302.
Upper Devonian (Genesee, Portage); New York, Illinois, Missouri, Kentucky: Middle Devonian (Cedar Valley, Hamilton, Cuboides); Wisconsin, Ontario, Manitoba, Missouri: Mississippian (Kinderhook); Missouri.

Ptyctodus compressus Eastman.

Hay, O. P. 1902 A, 323.
Cleland, H. F. 1911 A, 150, pl. xlviii, figs. 18-27.

Type *P. obliquus* Pander.

Eastman, C. R. 1907 B, 20, 72.
1908 A, 135, 286, pl. v, figs. 18-27.
Hussakof and Bryant 1919 A, 12, 15, 17, 110, pl. xxxvi, figs. 3-9, 11, 12; pl. xxxvii, figs. 1-8, 10-13.
Norton, W. H. 1906 A, 356.
Upper Devonian (State Quarry); Iowa: (Genesee); New York: Middle Devonian (Cedar Valley); Iowa.

Ptyctodus eastmani Weller.

Weller, S. 1906 A, 462, pl. i, figs. 31, 32.
Eastman, C. R. 1908 A, 137, 149.
Mississippian (Kinderhook); Missouri.

Ptyctodus ferox Eastman.

Hay, O. P. 1902 A, 323.
Branson, E. B. 1914 A, 63, pl. iv, figs. 3, 4.
1922 A, 42, 44, 127, 131, pl. xxi, fig. 12.
Cleland, H. F. 1911 A, 151, pl. xlix, figs. 35-40.
Eastman, C. R. 1907 B, 15, 16, 20, 72.
1908 A, 128, 135, 277, 286, figs. 20-22.
Hussakof and Bryant 1919 A, 116.
Norton, W. H. 1906 A, 356.
Teller, E. E. 1906 A, 164.
1911 A, 271.
Middle Devonian (Craghead); Missouri: (Hamilton); Wisconsin: (Cedar Valley); Iowa: Upper Devonian (State Quarry); Iowa: (Snyder Creek); Missouri.

Ptyctodus howlandi Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 112, pl. xxxviii; text-fig. 38.
Upper Devonian (Genesee); New York.

Ptyctodus punctatus Eastman.

Eastman, C. R. 1907 B, 13, 70, fig. 15.
Eastman, C. R. 1908 A, 133, 277, pl. iii, fig. 6.
Middle Devonian (Onondaga); New York, Ohio.

Ptyctodus sp. indet.

Eastman, C. R. 1907 B, 17. Upper Devonian (Portage); New York.
1908 A, 281. Upper Devonian (Portage); New York.
Udden, J. A. 1897 A, 95. Devonian (Hamilton); Iowa.

RHYNCHODUS Newb. Type *R. secans* Newb.

Hay, O. P. 1902 A, 323.
Bridge, T. W. 1904 A, 468.
Dean, B. 1906 B, 134, 150, fig. 118.
1912 A, 226.
Eastman, C. R. 1904 E, 295.
1906 D, 24.
1907 B, 67, 193, 234.
1908 A, 119, 120, 123.
1915 B, 440.
Garman, S. 1904 A, 246.
Hay, O. P. 1901 B, 68.
Huene, F. 1900 A, 65.
Hussakof and Bryant 1919 A, 107, 125.
Jaekel, O. 1901 A, 558-560 (Syn. of Ptyctodus).
1903 G, 389, 392 (Rynchodus).
1906 D, 180.
Jordan, D. S. 1923 A, 105.
Lambe, L. M. 1904 C, 16.
Weller, S. 1902 A, 427.
Zittel and Koken 1911 A, 83.
Zittel and Schlosser 1923 A, 44.
Zittel and Woodward 1902 A, 45.

Rhynchodus excavatus Newb.

Hay, O. P. 1902 A, 323 (R. excavatus, R. occidentalis).
Cleland, H. F. 1911 A, 148, pl. xlvii, fig. 4.
Eastman, C. R. 1907 B, 15, 16, 68.
1908 A, 124, 277, fig. 18.
1908 B, 68 (R. occidentalis a syn.).
Hussakof, L. 1908 A, 42.
Hussakof and Bryant 1919 A, 116.
Norton, W. H. 1906 A, 356 (R. occidentalis).
Teller, E. E. 1911 A, 271.
Udden, J. A. 1899 A, 302.
Middle Devonian (Hamilton); Wisconsin: (Cedar Valley); Iowa.

Rhynchodus ornatus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 117, pl. xxxix, figs. 1, 2.
Upper Devonian (Genesee); New York.

Rhynchodus pertenuis Eastman.

Eastman, C. R. 1904 E, 297, fig. 2.
Eastman, C. R. 1907 B, 20, 69, 234, pl. ii, fig. 5.
1908 A, 131, 287, fig. 19.
Upper Devonian (Chemung); New York.

Rhynchodus secans Newb.

Hay, O. P. 1902 A, 323.
Claypole, E. W. 1896 B, 354.
1903 A, 321.
Dean, B. 1906 B, 138, fig. 127.
Eastman, C. R. 1907 B, 13, 67.
1908 A, 123, 128, 277.
Hussakof, L. 1908 A, 42.
Newberry, J. S. 1874 H, 192.
Stauffer, C. R. 1909 A, 170.
Orton, E. 1878 A, 626.
Middle Devonian (Columbus and Delaware); Ohio.

Rhynchodus telleri Hussakof and Bryant.

Hussakoff and Bryant 1919 A, 15, 116, text-fig. 39.
Upper Devonian (Genesee); New York.

Rhynchodus sp. indet.

Hay, O. P. 1902 A, 323. Devonian; Manitoba.
Clarke and Luther 1904 A, 64 Devonian (Chemung); New York.
Cleland, H. F. 1911 A, 148, pl. xlvii, fig. 6.
Eastman, C. R. 1907 B, 15, 16, 21, 70. Devonian (Chemung); New York: (Cedar Valley); Iowa, Illinois.
1908 A, 132, 281. Devonian (Chemung, Naples); New York: 277, Devonian ("Cuboides"); Manitoba: 281, 287, Devonian (New Albany); Kentucky: 132, Mississippian (Waverly); Kentucky.
Hussakof, L. 1908 A, 42.
Lambe, L. M. 1904 C, 34. Devonian (Cuboides); Manitoba.
Teller, E. E. 1911 A, 271. Devonian (Hamilton); Wisconsin.
Tyrrell, J. B. 1892 A, 209. Upper Devonian; Manitoba.

DEINODUS Hussakof and Bryant. Type *D. bennetti* Hussakof and Bryant.

Hussakof and Bryant 1919 A, 123.
Jordan, D. S. 1923 A, 105.

Deinodus bennetti Hussakof and Bryant.

Hussakof and Bryant 1919 A, 10, 123, pls. xlii, xliii.
Middle Devonian (Onondaga); New York.

PALÆOMYLUS Woodward. Type *Rhynchodus frangens* Newb.

Hay, O. P. 1902 A, 323.
Bridge, T. W. 1904 A, 468.
Dean, B. 1906 B, 134, fig. 117.
Eastman, C. R. 1904 E, 295.
1906 D, 24.
1907 B, 153, 193, 232.
1908 A, 119, 120.
Hay, O. P. 1901 B, 68.
Hussakof and Bryant 1919 A, 107.
Jaekel, O. 1903 G, 391.
Heller, E. E. 1906 A, 164, 167.
Weller, S. 1902 A, 427.
Woodward, A. S. 1898 B, 55.
Zittel and Koken 1911 A, 84.
Zittel and Schlosser 1923 A, 44.
Zittel and Woodward 1902 A, 45.

Palæomylus crassus (Newb.).

Hay, O. P. 1902 A, 323.
Claypole, E. W. 1896 B, 354 (Rhynchodus).
1903 A, 321 (Rhynchodus).
Dean, B. 1906 B, 139, fig. 129.
Eastman, C. R. 1907 B, 13.
1908 A, 128, 277.
Hussakof, L. 1908 A, 41.
Hussakof and Bryant 1919 A, 121, text-fig. 42.
Newberry, J. S. 1874 H, 192 (Rhynchodus).
Orton, E. 1878 A, 626 (Rhynchodus).
Stauffer, C. R. 1909 A, 170.
Middle Devonian (Columbus and Delaware); Ohio.

Palæomylus frangens (Newb.).

Hay, O. P. 1902 A, 323.
Claypole, E. W. 1896 B, 354 (Rhynchodus).
1903 A, 321 (Rhynchodus).
Eastman, C. R. 1907 B, 13.
1908 A, 277.
Hussakof, L. 1908 A, 41.
Hussakof and Bryant 1919 A, 121, text-fig. 42.
Newberry, J. S. 1874 H, 192 (Rhynchodus pangens).
Orton, E. 1878 A, 626 (Rhynchodus).
Stauffer, C. R. 1909 A, 170.
Middle Devonian (Columbus and Delaware); Ohio.

Palæomylus greenei (Newb.).

Hay, O. P. 1902 A, 323.
Cleland, H. F. 1911 A, 151, pl. l.
Dean, B. 1906 B, 139, fig. 128.
Eastman, C. R. 1907 B, 15, 153.
1908 A, 128, 277.
Hussakof, L. 1908 A, 42.
Hussakof and Bryant 1919 A, 119, text-fig. 40.
Sauvage, H. E. 1899 A, 5.
Teller, E. E. 1906 A, 167, pl. iv.
1911 A, 270.
Middle Devonian (Hamilton); Wisconsin.

Palæomylus lunaformis Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 119, pl. xl, figs. 4-6; text-figs. 41, 42.
Upper Devonian (Genesee); New York.

Palæomylus sp. indet.

Hussakof and Bryant 1919 A, 15, 122, pl. xli.
Upper Devonian (Genesee); New York.

COCCOSTEIDÆ Traquair.

Traquair, R. H. 1890 A, 20.
Hay, O. P. 1902 A, 344.
Abel, O. 1908 E, 422 ("coccosteiden").
1912 F, 440.
1919 A, 99.
Bridge, T. W. 1904 A, 536.
Eastman, C. R. 1901 C, 329 ("coccosteans").
1904 C, 143.
1906 D, 3.
1907 A, 226.
1907 B, 23, 113.
1908 A, 160, 184.
1917 A, 237.
Goodrich, E. S. 1909 A, 263.
Gregory, W. K. 1907 D, 447.
Hussakof, L. 1906 A, 139 ("coccosteids").
Jaekel, O. 1919 A, 75, 81, 87, fig. 3 ("coccostei").
1926 A, 174, 181 ("coccosteiden").
Jordan, D. S. 1923 A, 88.
Kiaer, J. 1924 A, 116, 117.
Lütken, C. 1871 A, 294 ("coccostées").
Marinelli, W. 1925 A, 169.
Regan, C. T. 1904 A, 340.
Schlosser, M. 1917 A, 133 ("coccosteiden").
Steinmann, G. 1907 A, 419.
Stensiö, E. A. 1925 B, 164 ("coccosteids").
Zittel and Koken 1911 A, 80.
Zittel and Schlosser 1923 A, 41.
Zittel and Woodward 1902 A, 58.

COCCOSTEINÆ Hay.

Hay, O. P. 1902 A, 344.
Abel, O. 1912 F, 596 ("coccosteiden").
Dean, B. 1901 C, 120, 122 (Coccosteidæ).
Gebhardt, F. A. M. W. 1907 A, 73 ("coccosteiden").
Jaekel, O. 1901 A, 558 ("coccosteiden").
1902 A, 106 ("coccosteiden").
1903 D, 41, 58 ("coccosteiden").
1903 E, 86 ("coccosteiden").
1903 F, 39 ("coccosteiden").
Jaekel, O. 1903 G, 390 ("coccosteiden").
1904 A, 33 ("coccosteiden").
1906 B, 80 ("coccosteiden").
1906 D, 183 ("coccosteiden").
1907 A, 171 ("coccosteiden").
Jordan, D. S. 1905 A, i, 586; ii, 564 (Coccosteidæ).
1907 B, 760 (Coccosteidæ).
Lütken, C. 1868 C (Coccostei).

COCCOSTEUS Agassiz. Type *C. decipiens* Agassiz.

Hay, O. P. 1902 A, 344.
Abel, O. 1907 D, (159).
1908 E, 410.
1912 F, 439, 596, fig. 323.
1919 A, 93, 99, figs. 53, 56, 58.
1920 A, 324, fig. 514.
1921 A, 160, fig. 24.
Adams, L. A. 1919 A, 122, fig. 3.
Allis, E. P. 1898 A, 443.
Allis, E. P. 1905 A, 492.
Arldt, T. 1923 A, 482.
Barkas, W. J. 1874 D, 549.
Bridge, T. W. 1904 A, 536, 736.
Bronn, H. G. 1848 A, 317.
1849 A, 656.
Claypole, E. W. 1896 B, 350 et seq.
1900 A, 246.
1903 A, 313, 316.

Coulon, L. 1903 A, 135.
Dean, B. 1893 E, 187.
1900 A, 3, 12, 21, 24.
1901 A, 87.
1901 C, 123.
1904 D, 64.
1907 A, 48.
1908 A, 202.
1909 C, 274, figs. 62-65.
Dean, Gudger, Henn 1923 A, 664.
Deecke, W. 1913 A, 88.
Delafontaine, M. 1877 A, 267.
Eastman, C. R. 1898 E, 183.
1900 G, 287.
1904 C, 143.
1905 A, 41, fig. 4.
1906 A, 141.
1906 D, 1.
1907 B, 115, 119, 193, Coccosteus; 144 (Protitanichthys, type D. fossatus).
1908 A, 186, 188 (Coccosteus); 201 (Protitanichthys).
Frassetto, F. 1915 A, fig. 5.
Frech, F. 1897 A, 123.
Gaudry, A. 1893 A, 120, fig. 97.
Gebhardt, F. A. M. W. 1907 A, 85.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1904 A, 494.
1909 A, 508, figs.
Heilprin, A. 1887 A, 149, 301.
Hennig, E. 1920 B, 113.
Hoernes, R. 1886 A, 547.
Hussakof, L. 1906 A, 120, figs. 12, 13, 19.
1908 C, 311 (Protitanichthys).
1909 B, 264.
1912 B, 127.
Huxley, T. H. 1858 D, 505, 515.
1861 D, 449.
Jaekel, O. 1903 B, 12.
1903 D, 52, fig. 6.
1906 A, 11, fig. 6.
1906 B, 80, fig. 10.
1906 D, 185, fig. 7.
1907 A, 171, fig. 1.
1908 C, 426, figs. 1, 2.
1911 A, 47, figs. 33, 34.
1919 A, 75, 87, 100, figs. 10, 14.
1927 B, 332.
Kemna, A. 1904 A, 75.
Kingsley, J. S. 1925 A, 117, fig. 124.
Koenen, A. 1876 A, 667.
1890 B, 198.
Koken, E. 1893 B, 175.
Koschkaroff, D. N. 1906 A, 298.
Lankester, E. R. 1864 D, 292.
1905 A, 256, fig. 185.
Mantell, G. A. 1844 A, 647, fig. 135.
Miller, H. 1851 A, 92.
Miller, J. 1869 A, 384.
Moodie, R. L. 1920 D, 14.
1923 B, 292.
1926 A, 82, 83, pls. vii, ix, text-figs. 1, 5.
Murchison, R. I. 1841 A, 99.
1854 A, 252, fig. 48.
Osborn, H. F. 1902 H, 749.
1905 N, 235.
1916 E, 606, fig. 14.
1917 B, 170, fig.
Owen, R. 1866 A, 196, 247.
Patten, W. 1912 A, 388.
Pompeckj, J. F. 1913 A, 1116, fig. 13.
Regan, C. T. 1904 A, 340, figs. 3, 4.
Schuchert, C. 1915 A, 686, fig. 408.
Sollas and Sollas 1903 A, 271.
Smith, B. 1909 B, 594.
Steinmann, G. 1907 A, 419, fig. 742.
Stensiö, E. A. 1925 B, 147, 170, figs. 23, 24*a*, 25.
Traquair, R. H. 1890 H, 483.
1903 A, 733.
Watson and Day 1916 A, 28.
Weller, S. 1902 A, 427.
Woodward, A. S. 1915 B, lxx.
1922 B, 30, fig. 4.
1922 C, 79, fig. 82.
Woodward, H. 1878 A, 16, pl. ii, fig. 1.
Zittel and Koken 1911 A, 81, fig. 138.
Zittel and Schlosser 1923 A, 41, figs. 50-52.
Zittel and Woodward 1902 A, 59.

Coccosteus canadensis Woodward.

Hay, O. P. 1902 A, 344.
Clarke, J. M. 1913 A, 113.
Eastman, C. R. 1907 B, 17, 115.
1908 A, 280.
Hussakof, L. 1912 B, 127, pl. i, text-fig. 1.
Hussakof and Bryant 1919 A, 26, pl. v, figs. 1-3.
Lambe, L. M. 1904 C, 17, 34, 42.
Traquair, R. H. 1903 A, 733.
Whiteaves, J. F. 1907 B, 251.
Upper Devonian (Scaumenac); Quebec.

Coccosteus cuyahogæ Claypole.

Hay, O. P. 1902 A, 344.
Claypole, E. W. 1903 A, 320.
Eastman, C. R. 1907 B, 18.
1908 A, 283.
Woodward, A. S. 1922 B, 35.
Upper Devonian (Cleveland); Ohio.

Coccosteus fossatus (Eastman).

Eastman, C. R. 1907 B, 14, 144, 233, pl. x, fig. 2; text-fig. 30 (Protitanichthys, type).
Eastman, C. R. 1908 A, 201, 278, fig. 30 (Protitanichthys.
Hussakof, L. 1908 C, 311 (Protitanichthys).
1909 B, 270, pl. xlv, text-fig. 7.
Stauffer, C. R. 1909 A, 170 (Protitanichthys).
Middle Devonian (Delaware); Ohio.

Coccosteus macromus Cope.

Hay, O. P. 1902 A, 344.
Eastman, C. R. 1907 B, 21, 116.
1908 A, 186, 287.
Hussakof, L. 1908 A, 6.
Upper Devonian (Chemung); Pennsylvania.

Coccosteus occidentalis Newb.

Hay, O. P. 1902 A, 344.
Claypole, E. W. 1896 B, 354.
1903 A, 320.
Eastman, C. R. 1907 B, 14, 115, 145, pl. ix, fig. 3.
1908 A, 186, 278.
Hussakof, L. 1906 A, 137, fig. 22.
1908 A, 6.
1909 B, 272, fig. 8.

Moodie, R. L. 1926 A, 66.
Newberry, J. S. 1889 A, 52, pl. xxx, figs. 2, 2a.
Orton, E. 1878 A, 625.
Stauffer, C. R. 1909 A, 169.
Traquair, R. H. 1903 A, 733.
Middle Devonian (Delaware); Ohio, New York?.

Coccosteus parvulus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 19, 29, pl. iv, figs. 1-3; pl. lxx, fig. 1.
Upper Devonian (Portage); New York.

Coccosteus sp. indet.

Cross, W. 1905 C, 4. Devonian (Elbert); Colorado.
Cockerell, T. D. A. 1913 A, 246. Ordovician?; Colorado.
Eastman, C. R. 1907 B, 14, 115, pl. i, fig. 9. Devonian (Onondago); New York.
1908 A, 278.
Hussakof and Bryant 1919 A, 19. Upper Devonian (Portage); New York.

LISPOGNATHUS Miller. Type *L. spatulatus* (Newb.).

Miller, S. A. 1892 A, 716.
Hay, O. P. 1902 A, 345 (Liognathus; preoccupied).
Dean, B. 1901 C, 120 (Liognathus).
Jordan, D. S. 1920 C, 458.

Lispognathus spatulatus (Newb.).

Hay, O. P. 1902 A, 345 (Liognathus).
Claypole, E. W. 1903 A, 320 (Liognathus).
Eastman, C. R. 1907 B, 14, 145 (Liognathus).
1908 A, 186 (Liognathus); 278 (Coccosteus).
Hussakof, L. 1906 A, 140, fig. 21 (Liognathus, Coccosteus).
1908 A, 15 (Liognathus).
1908 C, 312 (Liognathus).
Orton, E. 1878 A, 626 (Liognathus).
Stauffer, C. R. 1909 A, 169 (Coccosteus).
Middle Devonian (Delaware); Ohio.

ASPIDICHTHYS Newb. Type *A. clavatus* (Newb.).

Hay, O. P. 1902 A, 345.
Arldt, T. 1923 A, 482.
Hussakof and Bryant 1919 A, 92.
Jaekel, O. 1927 B, 334.
Jordan, D. S. 1919 B, 371.
Pompeckj, J. F. 1913 A, 1119.
Woodward, A. S. 1891 A, 311.
Zittel and Schlosser 1923 A, 44.
A genus of uncertain systematic position.

Aspidichthys clavatus Newb.

Hay, O. P. 1902 A, 345.
Claypole, E. W. 1896 B, 353.
1903 A, 321.
Eastman, C. R. 1907 B, 19, 156.
1908 A, 206, 285.
Hussakof, L. 1908 A, 22.
1919 A, 92.
Newberry, J. S. 1873 G, 157.
Woodward, A. S. 1891 A, 311.
Upper Devonian (Huron shale); Ohio: (Portage); New York?.

Aspidichthys? notabilis Whiteaves.

Hay, O. P. 1902 A, 345.
Eastman, C. R. 1907 B, 16.
1908 A, 279.
Hussakof and Bryant 1919 A, 13, 17, 91, pls. xxv, xxvi.
Lambe, L. M. 1904 C, 17, 34, 42.
Tyrrell, J. B. 1892 A, 209.
Upper Devonian (Genesee); New York: Middle Devonian (Hamilton); Ontario: Devonian (Cuboides); Manitoba.

Aspidichthys? sp. indet.

Eastman, C. R. 1907 B, 15. Devonian (Hamilton); New York.
1908 A, 282. Devonian (New Albany); Kentucky.
Kiaer, J. 1915 A, 38, pl. ii, figs. 3-4 ("coccosteomorph fish." This genus?) Upper Devonian?, Ellesmere Land.

PHLYCTÆNASPINÆ, new name.

Stensiö, E. A. 1925 B, 165 ("phlyctænaspids").

PHLYCTÆNASPIS Traquair. Type *Coccosteus acadicus* Whiteaves.

Hay, O. P. 1902 A, 345.
Arldt, T. 1923 A, 482.
Chapman, F. 1916 A, 212.
Dean, B. 1901 C, 120.
1904 D, 64 (Phlyctænius).
Dean, Gudger, Henn 1923 A, 665.
Eastman, C. R. 1906 D, 17.
1907 B, 115, 117.
Gebhardt, F. A. M. W. 1907 A, 86.
Goodrich, E. S. 1909 A, 260.
Hussakof, L. 1906 A, 132, fig. 17.
Jaekel, O. 1903 D, 53, 58.
1907 A, 185.
Jaekel, O. 1919 A, 75.
1926 A, 182.
1927 B, 332.
Jordan, D. S. 1903 A, 136.
1920 C, 453.
Pompeckj, J. F. 1913 A, 1118, 1119.
Stensiö, E. A. 1925 B, 165.
Whiteaves, J. F. 1907 B, 261.
Woodward, A. S. 1915 B, lxx.
1917 G, lxxx.
Zittel and Schlosser 1923 A, 42.
Zittel and Woodward 1902 A, 59.

Phlyctænaspis acadica (Whiteaves).

Hay, O. P. 1902 A, 345.
Chapman, F. 1916 A, 212, pl. xxi, fig. 6.
Eastman, C. R. 1907 B, 13.
1908 A, 188, 276.
Hussakof, L. 1906 A, 137.
Jaekel, O. 1895 C, 162.
Lambe, L. M. 1904 C, 16, 34, 42.
1912 A, 4.
Stensiö E. A. 1925 B, 165, figs. 20, 21.
Whiteaves, J. F. 1907 B, 265, pl. iv, figs. 1-4.
Lower Devonian; New Brunswick.

DINICHTHYINÆ Eastman.

Hay, O. P. 1902 A, 345.
Claypole, E. W. 1893 H, 22 ("palæozoic fishes").
Dames, W. 1898 E, 527, 529.
Dean, B. 1901 C, 120, 122 (Dinichthyidæ, Titanichthyidæ).
1911 B, 302 ("placoderms).
Eastman, C. R. 1907 A, 228 ("dinichthyids").
1909 B, 997 ("dinichthyids").
Goodrich, E. S. 1909 A, 263 (Dinichthyidæ, Titanichthyidæ).
Gregory, W. K. 1907 D, 447 (Dinichthyidæ; Trachosteidæ).
Hussakof, L. 1906 A, 140 ("dinichthyids").
Jaekel, O. 1903 D, 58 ("dinichthyiden").
1919 A, 76 ("dinichthyiden").
Jordan, D. S. 1905 A, i, 587 (Dinichthyidæ, Titanichthyidæ).
1907 B, 760 (Dinichthyidæ, Titanichthyidæ).
1923 A, 88 ("Dinichthyidæ, Titanichthyidæ).
Prosser, C. S. 1913 A, 349, 353 ("fossil-fishes").
Woodward, A. S. 1904 C, 190 ("dinichthyid fishes").

HUSSAKOFIA Cossmann. Type *Dinichthys minor* Newb.

Cossmann, M. 1910, Rev. crit. Paléozool., XIV, 74.
Hussakof, L. 1909 B, 263 (Brachygnathus, preoccupied).
Zittel and Schlosser 1923 A, 43 (Brachygnathus).

Hussakofia minor (Newb.).

Hay, O. P. 1902 A, 347 (Dinichthys).
Claypole, E. W. 1903 A, 320, 322 (Dinichthys).
Eastman, C. R. 1907 B, 19 (Dinichthys).
1908 A, 284 (Dinichthys).
Hussakof, L. 1906 A, 130, fig. 13 (Dinichthys).
1908 A, 12 (Dinichthys).
1909 B, 266, figs. 1-3 (Brachygnathus).
Smith, B. 1909 B, 593 (Dinichthys).
Upper Devonian (Cleveland shale); Ohio.

DINICHTHYS Newb. Type *D. hertzeri* Newb.

Hay, O. P. 1902 A, 345.
Abel, O. 1912 F, 487.
Adams, L. A. 1919 A, 123, pl. xi.
Allis, E. P. 1905 A, 492.
Anonymous, 1916 A, 140.
Arldt, T. 1923 A, 482.
Barkas, W. J. 1874 D, 550.
Branson, E. B. 1922 A, 6.
Bridge, T. W. 1904 A, 537.
Clark, W. 1898 A, 46, figs.
Dames, W. 1898 E, 528.
Claypole, E. W. 1896 B (Dinichthys, Gorgonichthys).
1903 A, 316 (Gorgonichthys).
Dean, B. 1893 E, 187.
1900 A, 26.
1900 B, 10.
1901 C, 111, 120, 123 (Dinichthys); 120 (Gorgonichthys?).
1907 A, 47, 48.
1908 A, 202.
1909 C, 277, figs. 58-61.
1923 A, 608.
Dean, Gudger, Henn 1923 A, 677.
Deecke, W. 1913 A, 89.
Delafontaine, M. 1877 A, 266.
Dollo, L. 1907 B, 107.
Eastman, C. R. 1905 A, 42.
1906 A, 132, 134.
1906 D, 1.
1907 A, 211.
1907 B, 96, 118, 193, 225.
1908 A, 188.
1909 C, 262.
1917 A, 249.
Gaudry, A. 1896 A, 59.
Gill, T. 1879 A, 7.
Gregory, W. K. 1914 E, 526.
1915 D, 324.
Heilprin, A. 1887 A, 149, 302.
Hennig, E. 1920 B, 113.
Huene, F. 1900 A, 64.
Hussakof, L. 1905 A, 27.
1906 A, 107, figs. 1, 2, 8, 9.
1909 B, 264.
1911 B, 126.
Jaekel, O. 1902 A, 112.
1907 A, 181.
1919 A, 75, fig. 6.
1927 B, 332.
Kayser, E. 1880 A, 819.
Kemna, A. 1903 A, 353.
1904 A, 77 (Dinichthys, Gorgonichthys).
Kingsley, J. S. 1925 A, 117.
Lankester, E. R. 1905 A, 257, fig. 185.
Moodie, R. L. 1920 C, 48, pl. i, figs. A, B.
1926 A, 66, 81, 83, pl. viii, text-figs. 1-4, 6.
Newberry, J. S. 1873 G, 157.
Norton, W. H. 1906 A, 357.
Orton, E. 1878 A, 635.
Osborn, H. F. 1902 H, 749.
1905 N, 235.
1917 B, 175.
Pompeckj, J. F. 1913 A, 1116.
Rogers, A. F. 1924 A, 548, pl. xxv, fig. 3.
St. John, O. 1902 A, 654.
Sauvage, H. E. 1899 A, 4.
1899 B, 86.
Schlosser, M. 1917 A, 133, 146.
Sharp, K. D. 1903 A, 263.
Smith, B. 1909 B, 588.
Stensiö, E. A. 1925 B, 170, fig. 23.

Teller, E. E. 1906 A, 167.
Traquair, R. H. 1880 A, 159.
Weller, S. 1902 A, 427.
Woodward, A. S. 1890 F, 147.
1915 B, lxx.
1922 B, 33, 35.
1922 C, 80.
Woodward, H. 1878 A, 16.
Wright, A. A. 1897 A, 59.
Zittel and Koken 1911 A, 82.
Zittel and Schlosser 1923 A, 42.
Zittel and Woodward 1902 A, 59.

Dinichthys armstrongi Hussakof and Bryant.

Hussakof and Bryant 1919 A, 54, pl. lxx, fig. 3 ("D. sp.," D. armstrongi).
Upper Devonian (Chemung); New York.

Dinichthys canadensis Whiteaves.

Hay, O. P. 1902 A, 346.
Claypole, E. W. 1903 A, 320, 322.
Eastman, C. R. 1907 B, 15.
1908 A, 279.
Hussakof, L. 1906 A, 137.
Kindle, E. M. 1914 B, 255.
Lambe, L. M. 1904 C, 17, 34, 42.
Tyrrell, J. B. 1892 A, 209.
Devonian ("Cuboides"); Manitoba.

Dinichthys clarki (Claypole).

Hay, O. P. 1902 A, 346.
Claypole, E. W. 1896 B, 350, et seq. (Gorgonichthys).
1903 A, 320 (Gorgonichthys).
Eastman, C. R. 1900 B, 35.
1907 B, 19.
1908 A, 284.
Gaudry, A. 1896 A, 59 (Gorgonichthys).
Hussakof, L. 1905 B, 412, 414, pl. xv, fig. 2; pl. xvii.
1908 A, 7.
Hyde, J. E. 1926 A, 497 (D. clarkii).
Upper Devonian (Cleveland); Ohio.

Dinichthys curtus Newb.

Hay, O. P. 1902 A, 346.
Adams, L. A. 1919 A, 122, fig. 4.
Branson, E. B. 1908 C, 368.
Claypole, E. W. 1903 A, 320, 322.
Eastman, C. R. 1907 B, 19, 21, 138, 228.
1908 A, 200, 284, 287.
Hussakof, L. 1905 B, 409; pl. xv, fig. 1; pl. xvi; text-figs. 1, 2.
1906 A, 110, pl. xii; text-fig. 5.
1908 A, 7.
Upper Devonian (Cleveland); Ohio: (Chemung); Pennsylvania.

Dinichthys halmodeus (Clarke).

Hay, O. P. 1902 A, 346.
Abel, O. 1919 A, 96, fig. 56.
Clarke and Ruedemann 1903 A, 766.
Eastman, C. R. 1907 B, 15, 126, 228, pl. ii, fig. 7; pl. x, fig. 1; text-fig. 24.
1908 A, 191, 278, fig. 27.
1917 A, 249, fig. 4.
Hussakof, L. 1906 A, 137, 140, 146, figs. 22, 24.
1908 C, 312
1912 B, 131.
Smith, B. 1909 B, 589, figs. 1-3.
1910 A, 658, fig. 2.
Stensiö, E. A. 1925 B, 175, fig. 24*b*.
Middle Devonian (Marcellus); New York.

Dinichthys hertzeri Newb.

Hay, O. P. 1902 A, 346.
Abel, O. 1912 F, 487.
1919 A, 102, fig. 61.
Baird, S. F. 1876 A, cc (D. herzeri).
Claypole, E. W. 1896 B, 353.
1903 A, 315, 320, 322.
Eastman, C. R. 1902 D, 655 (D. herzeri).
1907 B, 19, 228 (D. herzeri).
1908 A, 283 (D. herzeri).
Hussakof, L. 1905 B, 414.
1906 A, 118, pl. xiii, figs. 1-4; text-figs. 3, 11, 25.
1908 A, 10.
Hyde, J. E. 1926 A, 497 (D. herzeri).
Jaekel, O. 1919 A, 80, fig. 6.
Newberry, J. S. 1870 E, 20.
1873 G, 157.
1874 H, 189.
Prosser, C. S. 1913 A, 327 (D. herzeri).
St. John, O. 1902 A, 655.
Weller, S. 1926 A, 496, fig. (D. herzeri).
Woodward, H. 1878 A, 16, fig. 14.
Zittel and Koken 1911 A, 81, figs. 143, 144.
Zittel and Schlosser 1923 A, 43, fig. 55.
Zittel and Woodward 1902 A, 60, fig. 112.
Upper Devonian (Huron); Ohio, Kentucky: (Cleveland?); Ohio.

Dinichthys insolitus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 13, 53, pl. xxvii, fig. 3.
Upper Devonian (Genesee); New York.

Dinichthys intermedius Newb.

Hay, O. P. 1902 A, 346.
Abel, O. 1912 F, 487, fig. 370.
1919 A, 101, fig. 60.
Adams, L. A. 1919 A, 125, figs. 4, 5.
Anonymous 1916 A, 140.
Branson, E. B. 1908 B, 94.
1908 C, 366.
1909 A, 197.
Claypole, E. W. 1896 B, 351.
1903 A, 316, 320, 322.
Dames, W. 1898 E, 528, fig. 1.
Eastman, C. R. 1907 B, 19, 228, fig. 23.
1908 A, 195, 284.
Hussakof, L. 1903 A, 27, pl. v; text-figs. 1, 2.
1905 B, 411.
1906 A, 118, pl. xiii, fig. 5, text-figs. 4, 6, 10, 13, 19, 20, 24.
1908 A, 10.
Hussakof and Bryant 1919 A, 19, 33, figs. 5, 6 (This species?).
Jaekel, O. 1919 A, 80, 89, figs. 6, 10.
Jordan, D. S. 1907 B, 245, fig. 183.
Kemna, A. 1904 A, 68.

Kingsley, J. S. 1925 A, 117, fig. 123.
Koken, E. 1893 B, 172.
Moodie, R. L. 1926 A, 80.
Osborn, H. F. 1916 E, 604, fig. 12.
Pompeckj, J. F. 1913 A, 1117, fig. 15.
Smith, B. 1910 A, 661.
Stensiö, E. A. 1925 B, 174.
Woodward, A. S. 1922 B, 32, 34, figs. 4, 5.
1922 C, 80, fig. 83.
Zittel and Koken 1911 A, 81, figs. 142, 147.
Zittel and Schlosser 1923 A, 43, fig. 56.
Upper Devonian (Cleveland); Ohio.

Dinichthys kepleri Claypole.

Claypole, E. W. 1897 B, 322, pl. xx.
Eastman, C. R. 1908 A, 284 (Syn.? of D. hertzeri).
Upper Devonian (Cleveland); Ohio.

Dinichthys lincolni Claypole.

Hay, O. P. 1902 A, 347.
Clarke and Ruedemann 1903 A, 766.
Claypole, E. W. 1903 A, 314, 320, 322.
Dean, B. 1901 C, 112.
Eastman, C. R. 1907 B, 15, 129, 228, pl. vii, figs. 4-6.
1908 A, 193, 278, pl. ii, fig. 20.
Hussakof, L. 1906 A, 115, 117, 142.
Jaekel, O. 1919 A, 92, fig. 11.
Smith, B. 1909 B, 595.
Middle Devonian (Marcellus); New York.

Dinichthys magnificus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 13, 17, 36, pls. i, vii-ix; pl. xvii, fig. 3; pl. xxxii, fig. 1; text-figs. 7-9, 11, 12.
Bryant, W. L. 1916 A, 9 pl.
Upper Devonian (Genesee, Portage); New York.

Dinichthys missouriensis Branson.

Branson, E. B. 1914 A, 61, pl. ii, figs. 1, 2, 4.
Eastman, C. R. 1917 A, 248.
Upper Devonian; Missouri.

Dinichthys newberryi Clarke.

Hay, O. P. 1902 A, 347.
Abel, O. 1919 A, 96, fig. 56.
Clarke and Luther 1904 A, 59.
Clarke and Ruedemann 1903 A, 766.
Claypole, E. W. 1903 A, 320, 322.
Dames, W. 1898 E, 528, fig. 2 (This species?).
Eastman, C. R. 1907 B, 17, 133, 228, pl. vi, fig. 2.
1908 A, 198, 281.
1917 A, 248.
Hussakof, L. 1903 A, 35.
Hussakof and Bryant 1919 A, 13, 17, 45, pls. x, xi; text-figs. 13, 14.
Merrill, G. P. 1907 A, 10.
Smith, B. 1909 B, 593 (This species?).
Upper Devonian (Genesee, Portage?); New York: (New Albany); Kentucky.

Dinichthys præmaxillaris Hay.

Hay, O. P. 1902 A, 347.
Claypole, E. W. 1897 B, 323 (D. clarki).
Claypole, E. W. 1903 A, 320, 322 (D. clarki).
Eastman, C. R. 1908 A, 284 ("D. clarki").
Upper Devonian (Cleveland); Ohio.

Dinichthys precursor Newb.

Hay, O. P. 1902 A, 347.
Claypole, E. W. 1896 B, 354 (D.? præcursor).
1903 A, 320, 322 (D.? præcursor).
Eastman, C. R. 1907 B, 14.
1908 A, 278.
Hussakof, L. 1903 A, 35.
1906 A, 137.
1908 A, 12.
Stauffer, C. R. 1909 A, 169.
Middle Devonian (Columbus); Ohio.

Dinichthys prentis-clarki Claypole.

Hay, O. P. 1902 A, 347.
Eastman, C. R. 1907 B, 19.
1908 A, 284 (Syn.? of D. gouldi).
Hussakof, L. 1906 A, 146.
Kemna, A. 1904 A, 68.
Upper Devonian (Cleveland); Ohio.

Dinichthys pustulosus Eastman.

Hay, O. P. 1902 A, 347.
Branson, E. B. 1922 A, 22, 127, pl. xxxi, figs. 7, 8.
Cleland, H. F. 1911 A, 155, pl. xlv, figs. 1, 2, pl. xvi; text-fig. 4.
Dames, W. 1898 E, 530.
Dean, B. 1901 C, 122.
Eastman, C. R. 1902 D, 653, figs. 1, 2.
1906 A, 140, fig. 3.
1906 D, 12, fig. A.
1907 B, 15, 16, 17, 20, 130, 228, pl. ii, fig. 6; pl. v, figs. 2, 3; pl. xii; text-fig. 25.
1908 A, 49, 194, 278, 281, 286, pl. i, fig. 10; pl. iv; text-fig. 28.
1917 A, 248, pl. viii, fig. 8.
Hussakof, L. 1906 A, 137, 142, fig. 22.
1926 A, 245.
Hussakof and Bryant 1919 A, 13, 17, 50, pl. xii; pl. xiii, figs. 1, 2.
Norton, W. H. 1906 A, 356.
St. John O. 1902 A, 656, fig. 1 ("dinichthys").
Sauvage, H. E. 1899 B, 86.
Sauvage and Udden 1922 A, 138.
Teller, E. E. 1911 A, 270.
Upper Devonian (Genesee); New York: (State Quarry); Iowa: (New Albany); Kentucky: (Seneca); New York.
Middle Devonian (Hamilton); Wisconsin: (Cedar Valley); Iowa, Illinois: (Minèola); Missouri.

Dinichthys rowleyi Branson.

Branson, E. B. 1914 A, 60, pl. i, figs. 1, 2, 4-6; pl. iii, figs. 1, 2, 6.
Upper Devonian; Missouri.

Dinichthys subgracilis Branson.

Branson, E. B. 1911 B, 24, 29, pl. ii.
Upper Devonian (Ohio shales); Ohio.

Dinichthys tenuidens Hussakof and Bryant.

Hussakof and Bryant 1919 A, 19, 55, pl. lxix, fig. 2. Upper Devonian (Portage); New York.

Dinichthys terrelli Newb.

Hay, O. P. 1902 A, 347.
Baird, S. F. 1876 A, cc.
Branson, E. B. 1908 C, 363, figs. 1, 2.
1911 B, 30, pl. iii.
Claypole, E. W. 1896 B, 351.
1897 B, 323.
1903 A, 316, 320, 322.
Dean, B. 1909 C, 268, pls. xxxviii, xxxix.
1911 A, 801
Eastman, C. R. 1902 D, 655.
1906 D, 14, fig. C.
1907 B, 19, 228.
1908 A, 195, 284.
1917 A, 248.
Gaudry, A. 1896 A, 109, fig. 89.
Hussakof, L. 1905 B, 414.
1906 A, 118, figs. 20, 22, 24, 25.
1908 A, 12.
Hussakof and Bryant 1919 A, 32, pl. vi, figs. 1-3; text-fig. 10.
Hyde, J. E. 1926 A, 497.
Kemna, A. 1904 A, 68.
Newberry, J. S. 1874 H, 189, 214.
1889 A, *passim*, pl. iv, figs. 1, 2; pl. v, figs. 1-3; pl. vi, pl. vii, figs. 1, 2; pl. xxxii, fig. 1; pl. xxxiii, pl. xliii, fig. 2; pl. xlviii; figs. 1, 2; pl. 1.
St. John, O. 1902 A, 655.
Weller, S. 1926 A, 496, fig.
Upper Devonian (Cleveland and Ohio shales); Ohio.

Dinichthys tuberculatus Newb.

Hay, O. P. 1902 A, 347.
Arldt, T. 1923 A, 482.
Claypole, E. W. 1903 A, 320, 322.
Cleland, H. F. 1911 A, 156.
Dames, W. 1898 D, 529.
Eastman, C. R. 1907 B, 15, 16, 21, 137, 228.
1908 A, 199, 279, 286, 288.
1917 A, 249, pl. ii, fig. 1.
Hussakof, L. 1906 A, 150.
1908 A, 14.
Upper and Middle Devonian (State Quarry?) and (Cedar Valley); Iowa: (Hamilton); Wisconsin: (New Albany); Kentucky: (Chemung); Pennsylvania: (Corniferous?); Ohio: Devonian; Belgium.

Dinichthys sp. indet.

Hay, O. P. 1902 A, 347. Devonian (Catskill); New York.
Branson, E. B. 1914 A, 63, pl. i, fig. 3; pl. iii, figs. 2, 5-7. Devonian; Missouri.
Eastman, C. R. 1907 B, 16, 17, 139; pl. vi, fig. 1 (Various specimens; Wisconsin, New York).
1908 A, 282, 289, Devonian (Portage and Catskill 2 sp.?); New York.
Hussakof, L. 1908 A, 14, 21 (Third genus?) Upper Devonian (Cleveland); Ohio.
Hussakof and Bryant 1919 A, 19, 56, text-figs. 18-19. Upper Devonian (Portage); New York: 13, 60, Upper Devonian (Genesee); New York.

PERISSOGNATHUS Hussakof and Bryant. Type *P. aduncus* Hussakof and Bryant.

Hussakof and Bryant 1919 A, 13, 81.
The family position of this genus is doubtful.

Perissognathus aduncus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 10, 81, pl. xx, figs. 1-1*b*; pl. xxvii, figs. 4, 4*a*. Upper Devonian (Genesee); New York.

STENOGNATHUS Newb. Type *Dinichthys corrugatus* Newb.

Hay, O. P. 1902 A, 348.
Dean, B. 1901 C, 120.

Stenognathus corrugatus Newb.

Hay, O. P. 1902 A, 348.
Claypole, E. W. 1903 A, 320, 322 (Dinichthys).
Eastman, C. R. 1907 B, 19.
1908 A, 285.
Hussakof, L. 1908 A, 17.
1909 B, 267, fig. 4.
1911 B, 126.
Hussakof and Bryant 1919 A, 68.
Upper Devonian (Cleveland); Ohio.

Stenognathus denticulatus Hussakof and Bryant.

Hussakof and Bryant. 1919 A, 13, 71, text-fig. 23.
Upper Devonian (Genesee); New York.

Stenognathus dolichocephalus (Eastman).

Eastman, C. R. 1907 B, 17, 135, 228, pl. v, fig. 1 (Dinichthys).
Eastman, C. R. 1908 A, 281 (Dinichthys).
Hussakof, L. 1908 C, 311 (Dinichthys).
Hussakof and Bryant 1919 A, 66, text-figs. 21, 22.
Upper Devonian (Portage); New York.

Stenognathus gouldii (Newb.).

Hay, O. P. 1902 A, 346 (Dinichthys).
Claypole, E. W. 1903 A, 320, 322 (Dinichthys gouldi).
Dean, B. 1909 C, 272 (Dinichthys).
Eastman, C. R. 1907 B, 19 (Dinichthys).
1908 A, 284 (Dinichthys).
Hussakof, L. 1906 A, 146 (Syn. of Dinichthys prentis-clarki).
1908 A, 8, fig. 1 (Dinichthys).
1911 B, 126, pl. viii, fig. 5; text-fig. 6.

Hussakof and Bryant 1919 A, 68, 71, pl. xv, fig. 1.
Hyde, J. E. 1926 A, 498.
Stensiö, E. A. 1925 B, 179 (Dinichthys).
Upper Devonian (Cleveland); Ohio: (Genesee); New York.

Stenognathus gracilis (Claypole).

Hay, O. P. 1902 A, 346 (Dinichthys).
Adams, L. A. 1919 A, 125, fig. 4 (Stenognathus).
Claypole, E. W. 1903 A, 320, 322 (Dinichthys).
Eastman, C. R. 1907 B, 19 (Dinichthys).
1908 A, 284 (Dinichthys).
Hussakof, L. 1911 B, 126 (Dinichthys).
Upper Devonian (Cleveland); Ohio.

Stenognathus insignis Hussakof and Bryant.

Hussakof and Bryant 1919 A, 13, 73, pl. xxi, fig. 2; text-fig. 24; 78 (This species?). Upper Devonian (Genesee); New York.

Stenognathus mixeri Hussakof and Bryant.

Hussakof and Bryant 1919 A, 19, 75, text-fig. 25. Upper Devonian (Portage); New York.

Stenognathus ringuebergi (Newberry).

Hay, O. P. 1902 A, 347 (Dinichthys).
Claypole, E. W. 1903 A, 320, 322 (Dinichthys).
Eastman, C. R. 1907 B, 17, 134 (Dinichthys).
1908 A, 281 (Dinichthys).
Hussakof and Bryant 1919 A, 19, 68, pl. xi, fig. 2, pl. lxix, fig. 1.
Upper Devonian (Portage); New York.

MACHÆROGNATHUS Hussakof and Bryant. Type *M. woodwardi* Hussakof and Bryant.

Hussakof and Bryant 1919 A, 83.
The family position of this genus is doubtful.

Machærognathus woodwardi Hussakof and Bryant.

Hussakof and Bryant 1919 A, 10, 83, pl. xxi, figs. 1*a*, 1*b*; text-fig. 27. Upper Devonian (Genesee); New York.

TITANICHTHYS Newberry. Type *T. agassizii* Newb.

Hay, O. P. 1902 A, 348 (Titanichthys, Brontichthys).
Abel, O. 1912 F, 487.
Allis, E. P. 1905 A, 492.
Bridge, T. W. 1904 A, 537.
Claypole, E. W. 1896 B (Titanichthys, Brontichthys).
1903 A, 316.
Dames, W. 1898 E, 529.
Dean, B. 1900 A, 26.
1900 B, 12.
1901 C, 120.
1907 A, 48.
1908 A, 202.
1909 C, 270.
Eastman, C. R. 1905 A, 42.
1907 B, 140, 234.
1908 A, 203.
Gaudry, A. 1896 A, 59.
Heilprin, A. 1887 A, 149.
Hussakof, L. 1906 A, 120.
1909 B, 269.
1911 B, 124 (Brontichthys; syn. of Titanichthys).
Jaekel, O. 1919 A, 75.
1926 A, 166.
Kemna, A. 1903 A, 353.
1904 A, 69.
Koken, E. 1893 B, 172.
Newberry, J. S. 1889 A, 130.
Osborn, H. F. 1902 H, 749.
Pompeckj, J. F. 1913 A, 1116.
Sauvage, H. E. 1899 B, 86.
Stensiö, E. A. 1925 B, 137, 173.
Woodward, A. S. 1890 F, 147.
1915 B, lxx.
1922 C, 80.
Zittel and Koken 1911 A, 83.
Zittel and Schlosser 1923 A, 43.
Zittel and Woodward 1902 A, 60.

Titanichthys agassizii Newb.

Hay, O. P. 1902 A, 348.
Claypole, E. W. 1903 A, 320 (T. agassizi).
Dean, B. 1909 C, 270.
Eastman, C. R. 1907 B, 19, fig. 29.
1908 A, 204, 284, fig. 31.
Hussakof, L. 1908 A, 18, figs. 2, 5*a*.
Sauvage, H. E. 1899 B, 87.
Stensiö, E. A. 1925 B, 143, text-figs. 14, 16.
Upper Devonian (Cleveland); Ohio.

Titanichthys attenuatus Wright.

Hay, O. P. 1902 A, 348.
Claypole, E. W. 1903 A, 320.
Eastman, C. R. 1907 B, 19.
1908 A, 284.
Upper Devonian (Cleveland); Ohio.

Titanichthys brevis Claypole.

Hay, O. P. 1902 A, 348.
Eastman, C. R. 1907 B, 19.
1908 A, 284.
Upper Devonian (Cleveland); Ohio.

Titanichthys clarkii Newb.

Hay, O. P. 1902 A, 348.
Claypole, E. W. 1903 A, 316, 320 (T. clarki).
Dean, B. 1909 C, 270 (T. clarki).
Eastman, C. R. 1907 B, 19, 141, 234, figs. 27, 28 (T. clarki).
1908 A, 285 (T. clarki).
Hussakof, L. 1906 A, 120.
1908 A, 18, figs. 3, 4, 5*b* (T. clarki).
Kemna, A. 1904 A, 68 (T. clarki).
Upper Devonian (Cleveland); Ohio.

Titanichthys hussakofi, nom. nov.

Hay, O. P. 1902 A, 348 (Brontichthys clarki).
Claypole, E. W. 1895 I, 8 (Brontichthys clarki).
1903 A, 321 (Brontichthys clarki).
Eastman, C. R. 1907 B, 19 (Brontichthys clarki).
1908 A, 284 (Brontichthys clarki).
Hussakof, L. 1911 B, 124, fig. 1 (Titanichthys clarki).
Upper Devonian (Cleveland); Ohio.
The assignment of this species to *Titanichthys* requires a new specific name.

Titanichthys rectus Claypole.

Hay, O. P. 1902 A, 348.
Claypole, E. W. 1896 B, 351.
Claypole, E. W. 1903 A, 316, 320.
Eastman, C. R. 1907 B, 19.
1908 A, 285.
Hussakof, L. 1911 B, 125, fig. 3.
Hussakof and Bryant 1919 A, 65, text-fig. 20.
Upper Devonian (Cleveland shale); Ohio.

Titanichthys sp. indet.

Hay, O. P. 1902 A, 348.
Branson, E. B. 1914 A, 63, pl. iii. Upper Devonian, Missouri.
Cleland, H. F. 1911 A, 157. Middle Devonian; Wisconsin.
Hussakof and Bryant 1919 A, 65, text-fig. 20.
Upper Devonian (Cleveland); Ohio.

TRACHOSTEIDÆ Dean.

Dean, B. 1901 C, 120.
Dean, B. 1909 C, 276.

Trachosteus Newb. Type *T. clarkii* Newb.

Hay, O. P. 1902 A, 348.
Claypole, E. W. 1896 B, 351.
Dean, B. 1900 A, 25.
1901 C, 120.
1909 C, 272, figs. 56, 57.
Dean, Gudger, Henn 1923 A, 665.
Eastman, C. R. 1900 G, 288.
Hussakof, L. 1906 A, 148.
Hussakof and Bryant 1919 A, 91.
Jordan, D. S. 1920 C, 447 (*Dinichthys mirabilis* erroneously given as type).

Trachosteus clarkii Newb.

Hay, O. P. 1902 A, 348.
Claypole, E. W. 1903 A, 320 (T. clarki).
Dean, B. 1909 C, 272, pl. xli (T. clarki).
Eastman, C. R. 1907 B, 19 (T. clarki).
1908 A, 285.
Hussakof, L. 1908 A, 21.
Upper Devonian (Cleveland); Ohio.

MYLOSTOMATIDÆ A. S. Woodward.

Hay, O. P. 1902 A, 350.
Abel, O. 1919 A, 102.
Dean, B. 1901 C, 120, 122 (Mylostomidæ).
Eastman, C. R. 1906 D, 20 ("mylostomids").
1907 A, 211 ("mylostomid").
1907 B, 23, 149, 231.
1908 A, 177.
1909 C, 261 ("mylostomids").
Goodrich, E. S. 1909 A, 263 (Mylostomidæ).
Gregory, W. K. 1907 D, 447 (Mylostomidæ).
Jaekel, O. 1903 D, 58 ("mylostomatiden").
Jordan, D. S. 1905 A, i, 587 (Mylostomidæ).
1907 B, 760 (Mylostomidæ).
1923 A, 89 (Mylostomidæ).
Schlosser, M. 1917 A, 133 ("mylostomatiden").
Stensiö, E. A. 1925 B, 180 ("mylostomids").
Zittel and Schlosser 1923 A, 45.

Dinomylostoma Eastman. Type *D. beecheri* Eastman.

Eastman, C. R. 1906 D, 15, 23.
Dean, B. 1907 A, 47, 48.
Eastman, C. R. 1906 A, 137.
1907 B, 94, 151, 228.
1908 A, 177.
1909 B, 997.
1909 C, 261.
1917 A, 250.
Hussakof, L. 1906 A, 119.
1913 A, 245.
Woodward, A. S. 1922 B, 34.

Dinomylostoma beecheri Eastman.

Eastman, C. R. 1906 D, 23, pl. i, figs. 4, 5; pl. ii, figs. 13, 14, 16, 17; pls. iv, v; text-figs. F-H.
1906 A, 137, fig. 2.
1907 A, 226.
1907 B, 17, 151, 228, pl. xiv, figs. 5, 6; pl. xv; text-figs. 32, 33.
1908 A, 177, 282.
1909 C, 261.
Hussakof, L. 1908 A, 14.
1913 A, 246; fig. 1*a*.
Upper Devonian (Portage); New York.

Dinomylostoma buffaloensis Hussakof and Bryant.

Hussakof and Bryant 1919 A, 13, 86, pl. xxiii, fig. 1; pl. xxiv, figs. 1, 2, 4, 5; text-fig. 29.
Upper Devonian (Genesee); New York.

Dinomylostoma eastmani Hussakof.

Hussakof, L. 1913 A, 245, pl. xlvii, fig. 7; text-fig. 1*b*.
Eastman, C. R. 1908 A, 179 ("undescribed species").
Devonian (New Albany); Kentucky.

Dinomylostoma sp. indet.

Hussakof and Bryant 1919 A, 13, 19, 90, pl. xxiv, figs. 5, 6. Upper Devonian (Genesee); 19, 90, pl. xxiii, fig. 2: (Portage); New York.

COPANOGNATHUS Hussakof and Bryant. Type *C. crassus* Hussakof and Bryant.

Hussakof and Bryant 1919 A, 84.

Copanognathus crassus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 13, 84, pl. xxii, figs. 2-4; text-fig. 28.
Upper Devonian (Genesee); New York.

MYLOSTOMA Newb. Type *M. variabile* Newb.

Hay, O. P. 1902 A, 350.
Adams, L. A. 1919 A, 127.
Branson, E. B. 1922 A, 6.
Bridge, T. W. 1904 A, 537.
Claypole, E. W. 1896 B, 350, 351.
Dean, B. 1900 A, 26.
1901 B, 101.
1901 C, 120.
1907 A, 47, 48.
1908 A, 203.
1912 A, 226.
Dean, Gudger, Henn 1923 A, 664, 665.
Eastman, C. R. 1900 G, 288.
1906 A, 132, 136.
1906 D, 1, 20.
1907 A, 213.
1907 B, 97, 149, 231.
1908 A, 179.
1909 B, 997.
1909 C, 261.
1917 A, 250.
Hussakof, L. 1906 A, 119.
Hussakof and Bryant 1919 A, 125.
Pompeckj, J. F. 1913 A, 1118, 1120.
Stensiö, E. A. 1925 B, 164, 180.
Woodward, A. S. 1922 B, 35.
Zittel and Koken 1911 A, 84.

Mylostoma eastmani Branson.

Branson, E. B. 1914 A, 62, pl. ii, fig. 3.
Upper Devonian; Missouri.

Mylostoma newberryi Eastman.

Eastman, C. R. 1907 A, 224, fig. D.
1908 A, 180, 285.
1909 C, 262.
Hussakof, L. 1908 A, 16.
Upper Devonian (Cleveland); Ohio.

Mylostoma terrelli Newb.

Hay, O. P. 1902 A, 350.
Claypole, E. W. 1903 A, 320.
Eastman, C. R. 1906 D, pl. iii, fig. 21.
1907 A, 213.
1908 A, 180, 285.
1909 B, 997.
1909 C, 264.
1917 A, 251.
Hussakof, L. 1909 B, 268 (Syn. of M. variabile).
Upper Devonian (Cleveland); Ohio.

Mylostoma variabile Newb.

Hay, O. P. 1902 A, 350.
Abel, O. 1912 F, 439.
1919 A, 103, fig. 62.
1920 A, 324, fig. 515.
Claypole, E. W. 1903 A, 320.
Dean, B. 1901 B, 100, pls. vii, viii; text-figs. 3-10.
Eastman, C. R. 1906 A, 136, fig. 1.
1906 D, 21, pl. i, figs. 1-3, 6-9; pl. ii, figs. 10-12, 15; pl. iii, figs. 19, 20; text-fig. E.
1907 A, 213, pl. xix; text-figs. A-C.
1907 B, 19, 98, 149, 231, pl. xiv. figs. 1-4; text-figs. 18, 31.
1908 A, 162, 285, figs. 23, 25.
1909 B, 997.
1909 C, 263, figs. 1, 3.
Goodrich, E. S. 1909 A, 264, fig. 233 (M. variabilis).
Hussakof, L. 1908 A, 16.
1909 B, 267.
1911 B, 124, pl. viii, fig. 2 (Brontichthys clarki, Clark's specimen).
Newberry, J. S. 1889 A, 165, pl. xiii, figs. 3-5; pls. xv, xvi.
Zittel and Schlosser 1923 A, 45, fig. 58.
Upper Devonian (Cleveland); Ohio.

DIPLOGNATHUS Newb. Type *D. mirabilis* Newb.

Hay, O. P. 1902 A, 348.
Abel, O. 1912 F, 487.
Dean, B. 1900 A, 26.
1901 C, 120.
Dean, Gudger, Henn 1923 A, 664.
Eastman, C. R. 1908 A, 181.
Hussakof, L. 1906 A, 122, 148.
Schlosser, M. 1917 A, 133.
Stensiö, E. A. 1925 B, 176 (Diplognatus).
Zittel and Koken 1911 A, 83.
Zittel and Schlosser 1923 A, 43.

Diplognathus mirabilis Newb.

Hay, O. P. 1902 A, 348.
Adams, L. A. 1919 A, 125, fig. 4.
Claypole, E. W. 1896 B, 351 ("Diplognathus").
1903 A, 320 (D. mirabile).
Eastman, C. R. 1907 B, 19.
1908 A, 285.
1909 C, 269.
Hussakof, L. 1906 A, 149, fig. 25.
1908 A, 14.
Jaekel, O. 1919 A, 80, fig. 7.
Koken, E. 1893 B, 172.
Woodward, A. S. 1922 B, 32, fig. 4.
Upper Devonian (Cleveland); Ohio.

DINOGNATHUS Hussakof. Type *D. ferox* Hussakof.

Hussakof, L. 1909 B, 268.
Eastman, C. R. 1909 A, 998.
1909 C, 264, fig. 2.
1917 A, 251 (Syn.? of Mylostoma).

Dinognathus ferox Hussakof.

Hussakof, L. 1909 B, 268, fig. 5.

Eastman, C. R. 1909 B, 997.
1909 C, 264.
1915 B, 440.
1917 A, 251, fig. 5 (Syn. ? of Mylostoma terrelli).
Upper Devonian (Cleveland shale); Ohio.

SELENOSTEIDÆ Dean.

Dean, B. 1901 C, 120.
Goodrich, E. S. 1909 A, 263.

Jordan, D. S. 1905 A, i, 587.
1923 A, 89.

SELENOSTEUS Dean. Type *S. kepleri* Dean = *S. brevis* (Claypole).

Dean, B. 1901 A, 94.
1901 C, 114, 120.
Hussakof, L. 1906 A, 122.

Selenosteus brevis (Claypole).

Hay, O. P. 1902 A, 348 (Titanichthys).
Abel, O. 1919 A, 100, fig. 59 (S. kepleri).
Dean, B. 1901 A, 94, pls. v, vi; text-figs. 1, 2 (S. kepleri).

Eastman, C. R. 1907 B, 19 (S. kepleri).
1908 A, 285 (S. kepleri).
Goodrich, E. S. 1909 A, 264, fig. 233 (S. kepleri).
Hussakof, L. 1908 A, 17 (S. kepleri).
1911 B, 125, pl. viii, fig. 4.
Upper Devonian (Cleveland); Ohio.

Selenosteus sp. indet.

Hussakof and Bryant 1919 A, 19, 78, text-fig. 26. Upper Devonian (Portage); New York.

STENOSTEUS Dean. Type *S. glaber* Dean.

Dean, B. 1901 A, 89.
Dean, B. 1901 C, 120.
Hussakof, L. 1906 A, 148.
Jordan, D. S. 1920 C, 492 (Type "S. glaberi").
Stensiö, E. A. 1925 B, 173.

Stenosteus glaber Dean.

Dean, B. 1901 A, 89, pls. iii, iv.

Eastman, C. R. 1907 B, 19.
1908 A, 285.
Hussakof, L. 1908 A, 18.
Upper Devonian (Cleveland); Ohio.

Stenosteus pertenuis Branson.

Branson, E. B. 1911 B, 28, pl. i, figs. 8, 10, 11.
Devonian (Ohio shales); Ohio.

CALLOGNATHUS Newb. Type *C. regularis* Newb.

Hay, O. P. 1902 A, 338.
Dean, B. 1901 C, 120.

Callognathus regularis Newb.

Hay, O. P. 1902 A, 338.
Claypole, E. W. 1896 B, 353.
1903 A, 321 (C. regulare).
Hussakof, L. 1908 A, 6.
Upper Devonian (Cleveland); Ohio.

Callognathus serratus Newb.

Hay, O. P. 1902 A, 338.
Claypole, E. W. 1896 B, 353.
1903 A, 321.
Eastman, C. R. 1907 B, 17, 19.
1908 A, 282, 285.
Hussakof, L. 1908 A, 6.
Upper Devonian (Cleveland); Ohio: (Portage); New York.

Superorder DIPNEUSTA Haeckel.

Haeckel, E. 1868 A, 435, 441, 447.
Unless otherwise indicated the writers, as cited, use for this superorder the name Dipnoi.
Hay, O. P. 1902 A, 350.
Abel, O. 1912 F, 635 ("dipneusten").
1914 C, 354 ("dipneustes").
1919 A, 33, 171, fig. 7.
1920 A, 336, 339, fig. 539 (Dipneusti).
1921 A, 155 ("dipneusten").
1926 C, 44 ("dipneusten").
Agar, W. E. 1907 A, 625.
Allis, E. P. 1909 A, 202 (Dipneusta).
1913 A, 324.
1915 A, 594 (Dipneusti).
1922 A, 151 (Dipneusti).
1923 B, 156 (Dipneusti).
Anderson, R. J. 1912 D, 250.
Anthony, R. 1912 A ("dipnoïs").

Arldt, T. 1907 D, 651.
1923 A, 700 ("dipnoer").
Ayers, H. 1885 A, 479 ("dipnoer").
1906 A, 77 (Dipneusta).
Baird, H. S. 1922 A, 115.
Baraldi, G. 1877 A, 28.
Bardeleben, K. 1896 A, 113 ("dipnoer").
1901 A, 28 ("dipnoer").
1903 A, 20 ("dipnoer").
1907 A, 37.
Barrell, J. 1915 B, 402, 406.
Beer, G. R. 1926 A, 303 (Dipneusta).
Belling, D. E. 1912 A, 69.
Boas, J. E. V. 1914 C, 231.
Boulenger, G. A. 1901 D, 29 (Dipneusti).
1902 A, 150 (Dipneusti).
Braus, H. 1901 B, 165, 194 ("dipnoer").
1906 A ("dipnoer").

Bridge, T. W. 1878 A, 730.
1897 A, 602.
1904 A, 505, 738.
Brindley, H. H. 1900 A, 325 ("Dipnoans").
Briquel, P. 1898 A, 14 (Dipneustes).
Broili, F. 1904 A, 105 ("dipnoer").
Bronn, H. G. 1849 A, 812, seq.
Carter, J. T. 1905 A, 136, 139.
Carus, V. 1875 A, 594.
Case, E. C. 1915 A, 124 ("dipnoans").
1924 B, 7.
Chamberlin, T. C. 1900 A, 411 ("dipnoans").
Cockerell, T. D. A. 1911 A, 831 (Dipnoi or Dipneusti).
Cope, E. D. 1871 T, 449, 450.
1885 BB, 64.
1891 B, 455.
1891 N, 10, 14.
Coulon, L. 1903 A, 151 (Dipneustes).
Cunningham, J. T. 1897 A, 488.
1912 A, 246, 253.
Dames, W. 1899 B, 366.
Dean, B. 1900 A, 22, 29.
1912 A, 227.
1916 A ("fishes").
Dean, Gudger, Henn 1923 A, 677.
Delafontaine, M. 1877 A, 266.
Derjugin, K. 1910 A, 587.
1910 B, 208.
Dollo, L. 1889 E, 153 (Dipneustes).
1906 B, 136, 137 (Dipneustes).
Dombrowski, B. A. 1925 A, 79.
Drüner, L. 1902 A, 438 ("dipnoer").
Duméril, A. 1870 A, 427.
Eastman, C. R. 1900 G, 287.
1901 C, 329.
1905 A, 50 (Dipneusti).
1906 A, 132 (Dipneusti).
1906 D, 1 (Dipneusti).
1907 B, 23, 88, 228 (Dipneusti).
1908 A, 62 (Dipnoi); 69, 157 (Dipneusti).
1911 A, 20 (Dipneusti).
1917 A, 245, 247.
Eastman and Barbour 1902 A, 267 ("dipnoans").
Ebner, V. 1896 A, 146 ("dipnoer").
Edgeworth, F. H. 1925 A, 225.
Frassetto, F. 1915 A.
Fuchs, H. 1907 C, 26 ("dipnoer").
1908 C, 208 ("dipnoer").
1909 B, 165 ("dipnoer").
Fürbringer, K. 1902 A ("dipnoer").
1904 A ("dipnoer").
Gadow, H. 1896 A, 15.
1902 B, 359.
1910 A, 27.
Gaskell, W. H. 1908 A, 23, 45, 148 ("dipnoans").
Gaupp, E. 1898 B, 841, 865 ("dipnoer").
1901 B, 941 ("dipnoer").
1905 D, 920 ("dipnoer").
1906 B, 683.
Gegenbaur, C. 1867 B, 382, 391.
1870 C, 425.
1879 A, 522 ("dipnoer").
Gill, T. 1905 A, 658 (Dipnoi, Dipneusti).
1909 B, 838.
Goodrich, E. S. 1904 A, 480, 503.
1908 A, 765, 767.
1909 A, 230, 238, 366.
Goodrich, E. S. 1913 A, 80.
1924 A, 935.
Gregory, W. K. 1904 A, 58.
1907 D, 447 (Dipneusti).
1911 A, 509 ("dipnoans").
1911 B, 582.
1912 D, 220.
1914 C, 267.
1915 D, 320, 348.
1920 A, 218.
1922 A, 9, 79 ("dipnoans," Dipnoi).
1927 G, 267 ("dipnoan fishes").
Gregory and Adams 1915 A, 763.
Haeckel, E. 1873 A, 512, 520, 586 (Dipneusta).
1893 A, xvi (Dipneusta).
Hanson, F. B. 1919 B, 67 (Dipneusti).
Hase, A. 1907 A, 658 ("dipnoer").
1913 A ("dipnoer").
Hasse, C. 1893 B, 533.
1893 C, 91.
Hatschek, B. 1889 B, 115 ("dipnoer").
Heilprin, A. 1887 A, 302.
Hertwig, O. 1892 A.
Hilzheimer, M. 1913 A, 473 ("dipnoer").
Hoernes, R. 1886 A, 557.
Howes, G. B. 1894 A, 83.
1902 A, 525.
Hubbs, C. L. 1919 A, 570 (Amphibioidei, part; Dipneusti).
Hubrecht, A. A. W. 1908 A, 150.
Huene, F. 1926 A, 260 ("dipnoer").
Hussakof, L. 1906 A, 126 ("dipnoans").
1908 C, 313 ("dipnoans").
1910 B, 305 ("dipnoans").
Huxley, T. H. 1859 D, 417.
1869 G, 453.
1876 E, 103, 121.
1881 A, 454.
1883 B, 570.
Imms, A. D. 1904 A, 23.
Jacobshagen, E. 1919 A, 75, 110.
1920 A, 88, 92, 95 ("dipnoer").
Jaekel, O. 1901 A, 558, 559 ("dipnoer").
1902 B, 135 ("dipnoer").
1902 C, 610 ("dipnoer").
1902 E, 1115 ("dipnoer").
1903 F, 37 ("dipnoer").
1903 G, 389 ("dipnoer").
1906 D, 187 ("dipnoer").
1909 A, 198 ("dipnoer").
1911 A, 69, 77.
1927 A, 251 (Dipnoi).
1927 B, 338 ("dipnoer").
Jaquet, M. 1898 B, 320, pls. xxv-xxix (Protopterus).
Jordan, D. S. 1903 A, 136 ("dipnoans").
1905 A, i, 609; ii, 566 (Dipneusti).
1907 B, 225, 235, 760 (Dipneusti).
1923 A, 110.
Kathariner, L. 1899 A, 345 ("dipnoer").
Kehrer, F. A. 1896 A, 351.
Keith, A. 1911 A, 294.
Kellicott, W. E. 1905 A, 137.
Kerr, J. G. 1900 A, 233.
1900 B, 299.
1901 A, 694 ("dipnoans").
1908 A, 169 ("dipnoans").
1908 B, 170.

Keyes, C. 1922 A, pl. iii (Dipnoia).
1923 A, 113.
Kingsbury, B. F. 1895 A, 132.
Kingsley, J. S. 1885 B, 299.
1900 A, 249.
1901 B, 338.
1925 A, 13, 35, 115, 240.
Klaatsch, H. 1893 B, 654.
1893 C, 148, 181.
Koken, E. 1893 B, 252 ("dipnoer").
Krall, A. 1908 A, 578 ("dipnoer").
Lakjer, T. 1927 A ("dipnoer").
Leunis and Ludwig 1883 A, 777.
Lönnberg, E. 1901 A.
1902 A.
Lubosch, W. 1911 B, 741, 748 ("dipnoer").
Lull, R. S. 1917 B, 485, 488 (Dipneusti).
Luther, A. 1913 B, 33, 61 (Dipneusti).
Lütken, C. 1871 A, 291 ("diptériens").
Mayhew, R. L. 1924 A, 331.
Meek, A. 1916 A, 55.
Miall, L. C. 1872 A, 39.
Mollier, S. 1897 A, 3 ("dipnoer").
Müller, J. 1845 A, 135.
Nauck, E. T. 1926 B, 72 ("dipnoer").
Osborn, H. F. 1905 N, 235.
1916 E, 605.
1917 B, 311.
Osburn, R. C. 1907 A, 424.
1907 B, 181.
Oswald, F. 1911 A, 409.
Paramore, R. H. 1910 A, 1393.
Parker, W. K. 1879 C, 338.
1887 B, 54.
1888 C, 399.
1890 A, 62.
Parker and Haswell 1897 A, 229.
Pehrson, T. 1922 A.
Perret, A. 1900 A, 786 ("dipneustes").
Petronievics, B. 1919 A, 411 ("dipneustes").
Pompeckj, J. F. 1913 A, 1133.
Priem, F. 1908 B, 6 ("dipneustes").
Rabl, C. 1901 A, 489 ("dipnoer").
Rauther, M. 1913 A, 1099.
Regan, C. T. 1904 A, 330, 331, 339 (Dipneusti).
1909 B, 75, 76 (Dipneusti).
Reynolds, S. H. 1897 A, 105, 106, 539 (Dipneusta).
Ridewood, W. G. 1896 A, 386.
Röse, C. 1892 F, 399 ("dipnoer").
Romer, A. S. 1924 A, 121.
Rosén, N. 1916 A, 23.
Ryder, J. 1885 E, 91, 93.
1886 A, 71.
Sabatier, A. 1904 A, 249 ("dipneustes").
Sagemehl, M. 1883 A ("dipnoer").
1884 A ("dipnoer").
Sauvage, H. E. 1899 A, 6 ("dipnoiques").
Schauinsland, H. 1906 A, 483 ("dipneusten").
Schlosser, M. 1917 A, 133, 139, 146 ("dipnoer").
Schmalhausen, J. J. 1913 A, 47 ("dipnoer").
1913 B, 757 ("dipnoer").
1913 C.
1916 A, 65.
1916 B, 147.
1917 A, 108.
Schmalhausen, J. J. 1923 B, 543.
Schneider, A. 1887 A, 97, pl. xi (Dipneusti).
Schöne, G. 1902 A, 1 ("dipnoer").
Schuchert, C. 1915 A, 687.
Schuchert and Levene 1927 A, 285 ("lungfishes").
Semon, R. 1898 A, 100 ("dipnoer").
1899 B, 295 ("dipnoer").
1901 A, 180, 184 ("dipnoer").
1901 B, 130 ("dipnoer").
Sewertzoff, A. N. 1902 A, 593 ("dipnoer").
1918 A, 207.
1926 A, 507, 534 (Dipnoi, Dipneusta).
1926 C, 44 ("dipneusten).
1926 D, 26 (Dipneusta).
1926 F, 274.
Shann, E. W. 1919 A, 532.
Simpson, G. G. 1926 J, 173.
Smith, G. E. 1911 A, 293.
1912 A, 426.
Solger, B. 1880 A, 365 ("dipnoer").
Sollas, W. J. 1920 A, 525.
Sollas and Sollas 1903 A, 287.
Stannius, H. 1854 A, 7, seq.
Steinmann, G. 1907 A, 407.
1927 A, 76 ("dipnoer").
Stensiö, E. A. 1921 A, 135.
1925 A, 131, 182.
1925 B, 161, 187.
Steihan, P. 1900 A, 307 ("dipnoiques").
Stromer, E. 1912 A, 27.
1920 A, 12.
1925 B, 348.
Suschkin, P. P. 1910 A, 248 ("dipnoer").
Terra, P. 1911 A, 220.
Thevenin, A. 1910 A, 35 (Dipneustes).
Traquair, R. H. 1878 A, 12.
1880 A, 159.
1900 C, 505.
Ussow, S. 1900 A, 182.
Vanhoffen, E. 1891 A, 134 ("dipnoer").
Vogel, R. 1909 A, 501 ("dipnoer").
Wallace, A. R. 1876 A, ii, 458.
Watson, D. M. S. 1913 D, 26.
1925 A, 849.
1926 A, 190, 194.
Watson and Gill 1923 A, 163.
Wiedersheim, R. 1880 C, 122 ("dipnoer").
1892 A, 45 ("dipnoer").
Williston, S. W. 1912 E, 258.
Winslow, G. M. 1898 A, 149, 191.
Wintrebert, P. 1910 B, 79 ("dipneustes").
Woodward, A. S. 1898 E, 329, ("dipnoan fishes").
1906 C, 274.
1909 A, 323 ("dipnoans").
1910 B, 464 ("dipnoans").
1915 B, lxx.
1922 B, 27 (Dipneusti).
1922 C, 77.
1924 A, 114.
Woodward, H. 1904 B, 141.
Wright, W. 1909 A, 671.
Zittel and Koken 1911 A, 73.
Zittel and Schlosser 1923 A, 78.
Zittel and Woodward 1902 A, 61.

Order DIPTEROMORPHI, new name.

Hay, O. P. 1902 A, 351. (Ctenodipterini).
Arldt, T. 1907 D, 648 (Ctenodipterini).
Barrell, J. 1915 B, 402 (Ctenodipterini).
Briquel, P. 1898 A, 16 (Ctenodipterini).
Eastman, C. R. 1906 A, 142 ("ctenodipterines").
1906 D, 6 ("ctenodipterines").
1907 B, 23, 94, 157 (Ctenodipterini).
1908 A, 69, 158, 207 (Ctenodipterini).
1909 C, 269 ("ctenodipterines").
Gregory, W. K. 1907 D, 447 (Ctenodipterini).
Hilzheimer, M. 1913 A, 473 (Ctenodipterini).
Hoernes, R. 1886 A, 550 (Ctenodipteridæ).
Huxley, T. H. 1861 D, 440, 444 (Ctenodipterini).
Jaekel, O. 1911 A, 77 (Dipteri).
Jordan, D. S. 1905 A, i, 612 (Ctenodipterini).
1907 B, 238, 760 (Ctenodipterini).
1923 A, 110 (Ctenodipterini).
Klaatsch, H. 1890 A, 223 ("ctenodipterinen").
Semon, R. 1901 B, 130 ("ctenodipterinen").
Traquair, R. H. 1878 A, 12 (Ctenodipterini).
1880 A, 155, 159 (Ctenodipterini).
Zittel and Woodward 1902 A, 61 (Ctenodipterini).

DIPTERIDÆ Owen.

Owen, R. 1846 E, 50.
Hay, O. P. 1902 A, 351.
Agassiz, L. 1844 D, 142 ("dipteriens").
Bronn, H. G. 1849 A, 780, seq. (Dipterini).
Cope, E. D. 1891 N, 15.
Dean, Gudger, Henn 1923 A, 401.
Eastman, C. R. 1907 B, 23, 159.
1908 A, 210 (Ctenodontidæ).
Goodrich, E. S. 1908 A, 765.
1909 A, 256.
Jordan, D. S. 1905 A, i, 612.
1907 B, 226, 760.
1923 A, 110.
Reynolds, S. H. 1897 A, 70, 111, 117, 124.
Schlosser, M. 1917 A, 133 ("dipteriden").
Sewertzoff, A. N. 1923 B.
Stromer, E. 1905 H, 216.
Zittel and Koken 1911 A, 73.
Zittel and Schlosser 1923 A, 79.

DIPTERUS Sedgw. and Murch. Type *D. valenciennesi* Sedgw. and Murch.

Hay, O. P. 1902 A, 351.
Abel, O. 1907 D, (162).
1919 A, 33, 180, figs. 7, 129-135.
1920 A, 340, fig. 509.
Agassiz, L. 1832 A, 140.
1833 A, 471 (Catopterus).
1835 B, 342.
1835 H, 204 (Catopterus).
1839 A, 599.
1877 A, 124.
Allis, E. P. 1905 A, 487.
Arldt, T. 1923 A, 701.
Atthey, T. 1868 C, 354.
Barkas, W. J. 1874 D, 550.
Berry, E. W. 1925 A, 358.
Böklen, H. 1887 A, 78.
Bridge, T. W. 1897 A, 603.
1904 A, 506, fig. 301.
Briquel, P. 1898 A, 14.
Bronn, H. G. 1848 A, 428.
1849 A, 655.
Calvin, S. 1897 B, 17.
Coulon, L. 1903 A, 153.
Cunningham, J. T. 1912 A, 254, fig. 23.
Dean, B. 1907 A, 48.
Dean, Gudger, Henn 1923 A, 625.
Delafontaine, M. 1877 A, 268.
Derjugin, K. 1910 B, 208.
Eastman, C. R. 1905 A, 54, fig. 7.
1906 A, 131.
1907 B, 159, 193, 229, fig. 34.
1908 A, 210, 231, figs. 33, 34.
1911 A, 16, fig. 4.
1915 A, 282.
1917 A, 245.
Etheridge, R. 1906 A, 131.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1904 A, 503, 506, fig. 6.
1908 A. 765, 767.
Goodrich, E. S. 1909 A, 509, figs.
Gregory, W. K. 1915 D, 323, fig. 1.
Heilprin, A. 1887 A, 149, 301.
Hussakof, L. 1908 C, 312.
1910 B, 305.
Huxley, T. H. 1861 D, 434, figs. 9, 10.
1876 E, 121.
1876 F, 166.
Jaekel, O. 1911 A, 77, fig. 80.
Jordan, D. S. 1905 A, i, 612; ii, 567.
1907 B, 238.
Jordan and Evermann 1917 A, 125.
Kerr, J. G. 1900 B, 299.
Kiaer, J. 1924 A, 93, fig. 40.
Lankester, E. R. 1905 A, 250, fig. 182.
Lull, R. S. 1917 B, 485.
Miall, L. C. 1872 A, 40.
Miller, H. 1851 A, 92.
Müller, J. 1845 A, 93.
Murchison, R. I. 1845 A, 252, fig. 49.
Osborn, H. F. 1916 E, 605, fig. 14.
1917 B, 170, fig.
Petronievics, B. 1919 A, 407, 411.
Pompeckj, J. F. 1913 A, 1133, fig. 39.
Regan, C. T. 1904 A, 339.
Ridewood, W. G. 1896 A, 388.
Schlosser, M. 1898 D, 121.
Schmalhausen, J. J. 1913 A, 75.
Semon, R. 1901 A, 181.
1901 B, 125, figs. e-i.
Sewertzoff, A. N. 1923 B, 140.
1924 A, 579.
1926 A, 523, 534.
1926 C, 44.
1926 D, 80, 89.
Stensiö, E. A. 1921 A, 136.
1925 A, 182.
1925 B, 162.
Stromer and Peyer 1917 A, 37.

Suschkin, P. P. 1910 A, 249.
Traquair, R. H. 1880 A, 151, 159.
1889 D, 97, pl. ii.
1898 B, 46.
1900 C, 505.
Watson, D. M. S. 1916 B, 28, pl. i, fig. 1; text-figs. 6, 8, 9.
1917 A, 979.
1926 A, 195, figs. 2, 3.
Watson and Day 1916 A, 28, text-figs. 6, 8, 9.
Watson and Gill 1923 A, 168-215, figs. 32-34.
Woodward, A. S. 1910 B, 467.
1915 B, lxx.
1922 C, 77, fig. 78.
Zittel and Koken 1911 A, 74.
Zittel and Schlosser 1923 A, 79, figs. 135, 136.

Dipterus angustus Newberry.

Hay, O. P. 1902 A, 354 (Sagenodus).
Eastman, C. R. 1907 B, 22.
1908 A, 212, 289.
1917 A, 247, pl. viii, fig. 5.
Hussakof, L. 1908 A, 53 (Sagenodus).
Upper Devonian (Catskill or Chemung); Pennsylvania.

Dipterus calvini Eastman.

Hay, O. P. 1902 A, 351.
Eastman, C. R. 1907 B, 16, 160, 229, pl. iv, fig. 1.
1908 A, 49, 213, 219, 279, pl. ii, fig. 1.
Middle Devonian (Cedar Valley); Iowa.

Dipterus contraversus Hay.

Hay, O. P. 1902 A, 351.
Claypole, E. W. 1903 A, 320 (D. radiatus).
Eastman, C. R. 1907 B, 22.
1908 A, 212, 289.
Hussakof, L. 1908 A, 51.
Upper Devonian (Catskill); Pennsylvania.

Dipterus costatus Eastman.

Hay, O. P. 1902 A, 351.
Eastman, C. R. 1907 B, 20, 161, 229, pl. iv, fig. 9.
1908 A, 213, 220, 286, pl. ii, fig. 8.
Upper Devonian (State Quarry); Iowa.

Dipterus digitatus Eastman.

Eastman, C. R. 1908 A, 213, 221, pl. ii, fig. 6; pl. vii, figs. 16-25.
Branson, E. B. 1914 A, 65, pl. iv, fig. 21.
Eastman, C. R. 1908 A, 286.
1915 A, 282, fig. 2.
1917 A, 246.
Upper Devonian (State Quarry); Iowa, Missouri, Colorado.

Dipterus eastmani Stauffer.

Stauffer, C. R. 1909 A, 151, 182, 196, pl. xvii, figs. 14-17.
Middle Devonian (Columbus); Ohio.

Dipterus flabelliformis Newb.

Hay, O. P. 1902 A, 351.
Butts, C. 1903 A, 991 (Ctenodus).
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 21, 163.
1908 A, 214, 221.
Hussakof, L. 1906 A, 150.
1908 A, 51.
Devonian (Chemung); Pennsylvania.

Dipterus fleisheri (Newb.).

Hay, O. P. 1902 A, 351.
Eastman, C. R. 1907 B, 22, 162, 229, pl. vii, fig. 2.
1908 A, 212, 225, 289, pl. ii, fig. 16.
Hussakof, L. 1908 A, 52.
Upper Devonian (Catskill); Pennsylvania, New York.

Dipterus gemmatus Hussakof and Bryant.

Hussakof and Bryant 1919 A, 15, 170, pl. lv, fig. 2.
Upper Devonian (Genesee); New York.

Dipterus ithacensis Williams.

Hay, O. P. 1902 A, 351.
Eastman, C. R. 1907 B, 18, 163.
1908 A, 212, 213, 282.
Upper Devonian (Portage); New York.

Dipterus minutus Newb.

Hay, O. P. 1902 A, 352.
Claypole, E. W. 1903 A, 320.
Eastman, C. R. 1907 B, 21, 163.
1908 A, 214, 288.
Upper Devonian (Chemung); Pennsylvania.

Dipterus mordax Eastman.

Hay, O. P. 1902 A, 352.
Branson, E. B. 1922 A, 6, 35, 128, pl. xxi, fig. 11.
Eastman, C. R. 1907 B, 20, 161, 229, pl. iv, figs. 5, 6.
1908 A, 213, 215, 220, 286, pl. ii, figs. 4, 5; pl. vii, figs. 5-9.
1915 A, 282, fig. 3.
1917 A, 246.
Upper Devonian (State Quarry); Iowa: Devonian (Callaway); Missouri: Devonian; Colorado.

Dipterus nelsoni Newb.

Hay, O. P. 1902 A, 352.
Claypole, E. W. 1903 A, 319 (D. nelsoni), p. 320 (D. levis).
Eastman, C. R. 1907 B, 21, 163, 229 (D. alleghaniensis, D. levis as syns.).
1908 A, 213, 214, 223, 288, pl. ii, fig. 11; pl. vii, figs. 1-4 (D. levis a syn.).
Hussakof, L. 1906 A, 150.
1908 A, 52.
Upper Devonian (Chemung); Pennsylvania, New York.

Dipterus pectinatus Eastman.

Eastman, C. R. 1908 A, 213, 222, 286, pl. ii, figs. 2, 7; pl. vii, figs. 10-15.
Eastman, C. R. 1915 A, 282, fig. 4.
1917 A, 246.
Upper Devonian (State Quarry); Iowa: Devonian; Colorado.

Dipterus quadratus (Newb.).

Hay, O. P. 1902 A, 355 (Sagenodus).
Eastman, C. R. 1902 B, 97 (Sagenodus).
1902 G, 541 (Sagenodus).
1903 B, 194 (Sagenodus).
1907 B, 163.
1908 A, 214.
Hussakof, L. 1916 A, 131 ("Rhizodus quadratus").
Pennsylvanian; Ohio, Illinois.

Dipterus sherwoodi Newb.

Hay, O. P. 1902 A, 352.
Claypole, E. W. 1903 A, 320.
Eastman, C. R. 1907 B, 22, 162.
1908 A, 212, 226, 289.
Hussakof, L. 1908 A, 52.
Upper Devonian (Catskill); Pennsylvania.

Dipterus uddeni Eastman.

Hay, O. P. 1902 A, 352.
Eastman, C. R. 1907 B, 16, 160, 229, pl. iv, figs. 3, 4.
1908 A, 213, 218, 279, pl. ii, fig. 3.
Hussakof, L. 1908 A, 53.
Middle Devonian (Cedar Valley); Iowa.

Dipterus sp. indet.

Clarke, J. M. 1913 A, 98. Lower Devonian; New Brunswick.
Eastman, C. R. 1907 B, 164, pl. iv, figs. 2, 7, 8, 12. Upper Devonian (State Quarry); Iowa.
1908 A, 279. Middle Devonian (Cedar Valley); Iowa.
Hussakof and Bryant 1919 A, 15, 171. Upper Devonian (Genesee); New York.

PALÆDAPHUS Van Beneden and de Koninck. Type *P. insignis* Van B. and de K.

Hay, O. P. 1902 A, 352.
Arldt, T. 1923 A, 701.
Barkas, W. J. 1874 D, 547.
Gervais, P. 1852 A, explan. pl. lxxvii.
1859 A, 558, pl. lxxvii.
Jordan, D. S. 1923 A, 110.
Woodward, A. S. 1890 F, 147.
Zittel and Koken 1911 A, 74.
Zittel and Schlosser 1923 A, 80, fig. 137.
Zittel and Woodward 1902 A, 63.

Palædaphus lesleyi (Newb.).

Hay, O. P. 1902 A, 352.
Claypole, E. W. 1903 A, 319 (Heliodus).
Eastman, C. R. 1907 B, 21 (Heliodus).
1908 A, 213, 288 (Heliodus).
1909 B, 997 (Heliodus).
1909 C, 269 (Heliodus).
Hussakof, L. 1908 A, 53.
Devonian (Chemung); Pennsylvania.

CONCHODUS M'Coy. Type *C. ostreæformis* M'Coy.

Hay, O. P. 1902 A, 352.
Böklen, H. 1887 A, 78.
Eastman, C. R. 1908 A, 227.
Traquair, R. H. 1878 A, 16.
Zittel and Koken 1911 A, 74.

Conchodus plicatus Dawson.

Hay, O. P. 1902 A, 352.
Eastman, C. R. 1908 A, 234.
Lambe, L. M. 1904 C, 42.
Coal Measures; Nova Scotia.

Conchodus variabilis Eastman.

Eastman, C. R. 1908 A, 213, 230, 286, pl. viii, except figs. 16, 20, 29, 34.
Branson, E. B. 1914 A, 65, pl. iii, fig. 8.
Upper Devonian (State Quarry); Iowa: (Craghead); Missouri.

Conchodus sp. indet.

Bell, W. A. 1913 A, 340, Pennsylvanian (Joggins); Nova Scotia.

GANORHYNCHUS Traquair. Type *G. woodwardi* Traquair.

Hay, O. P. 1902 A, 352.
Etheridge, R. 1906 A, 129.
Traquair, R. H. 1874 A, 211.

Ganorhynchus beecheri Newb.

Hay, O. P. 1902 A, 352.
Claypole, E. W. 1903 A, 321.
Eastman, C. R. 1907 B, 21, 22.
1908 A, 213, 288.
Upper Devonian (Chemung, Catskill); Pennsylvania.

Ganorhynchus oblongus Cope.

Hay, O. P. 1902 A, 352.
Hussakof, L. 1908 A, 53, fig. 24.
Devonian (Catskill); Pennsylvania.

Ganorhynchus sp. indet.

Eastman, C. R. 1908 A, 213. Upper Devonian (Cedar Valley); Iowa.

PHANEROPLEURIDÆ.

Hay, O. P. 1902 A, 352.
Abel, O. 1919 A, 33, fig. 7 (Phaneropleuron).
Böklen, H. 1887 A, 78 (Phaneropleuron).
Briquel, P. 1898 A, 14 (Phaneropleuron).
Goodrich, E. S. 1908 A, 767, fig. 201 (Phaneropleuron).
1909 A, 255.
Hoernes, R. 1886 A, 550.
Jordan, D. S. 1905 A, i, 612; ii, 586 (Phaneropleuron).
1907 B, 238 (Phaneropleuron).
1923 A, 110.
Klaatsch, H. 1890 A, 221 ("phaneropleurinen").
Matthew, W. D. 1907 A, 9 (Phaneropleuron).

Schlosser, M. 1917 A, 133 ("phaneropleuriden").
Traquair, R. H. 1871 A, 534 (Phaneropleurini).
1872 A, 41, fig. (Phaneropleuron).
Traquair, R. H. 1893 C, 265.
Zittel and Koken 1911 A, 74.
Zittel and Schlosser 1923 A, 81.

SCAUMENACIA Traquair. Type *S. cura* (Whiteaves).

Hay, O. P. 1902 A, 353.
Abel, O. 1919 A, 33, 180, fig. 7.
1921 A, 249.
Clark, J. M. 1911 A, 128.
Dean, B. 1907 A, 48.
Eastman, C. R. 1908 A, 235.
Goodrich, E. S. 1904 A, 503.
1909 A, 233, 255, fig. 227.
Gregory, W. K. 1915 D, 323.
Hussakof, L. 1912 B, 134.
Lambe, L. M. 1904 C, 16.
Matthews, G. F. 1907 A, 9 (Phaneropleuron).
Petronievics, B. 1919 A, 412.
Schmalhausen, J. J. 1913 B, 757.
1913 C.
Stensiö, E. A. 1925 A, 182.
1925 B, 162.
Traquair, R. H. 1900 C, 506.
Watson, D. M. S. 1916 B, 33.
Watson and Day 1916 A, 39.
Watson and Gill 1923 A, 212.
Whiteaves, J. F. 1907 B, 252.
Zittel and Schlosser 1923 A, 81.

Scaumenacia curta (Whiteaves).

Hay, O. P. 1902 A, 353.
Abel, O. 1912 F, 636, fig. 470.
1919 A, 179, figs. 7, 137.
1920 A, 340, fig. 539.
Clarke, J. M. 1913 A, 113.
Claypole, E. W. 1883 C, 278 (Phaneropleuron).
Eastman, C. R. 1907 B, 17.
1908 A, 213, 235, 280, fig. 35.
1917 A, 247, fig. 2.
Gregory, W. K. 1915 D, 323, fig. 1.
Hussakof, L. 1912 B, 134, pls. ii, iii; text-figs. 3-6.
Hussakof and Bryant 1919 A, 171, pl. lvii, figs. 3, 4; text-fig. 57.
Lambe, L. M. 1904 C, 34, 42.
1912 A, 5.
Matthew, G. F. 1907 A, 9 (Phaneropleuron).
Pompeckj, J. F. 1913 A, 1134, fig. 40.
Traquair, R. H. 1900 C, 506.
Whiteaves, J. F. 1907 B, 253, pl. iii.
Zittel and Schlosser 1923 A, 81, fig. 138.
Upper Devonian (Scaumenac); Quebec.

CTENOPLEURON Matthew. Type *C. nerepisense* Matthew, G. F.

Matthew, G. F. 1907 A, 7.
Stromer, E. 1920 A, 11.
Woodward, A. S. 1915 B, lxiii.

Ctenopleuron nerepisense Matthew, G. F.

Matthew, G. F. 1907 A, 7, plate.
Kiaer, J. 1924 A, 124, 134.
Woodward, A. S. 1910 D, 31.
Silurian (Clinton); New Brunswick.

Order CERATODONTOMORPHI, new name.

Hay, O. P. 1902 A, 353 (Sirenoidei).
Agar, W. E. 1906 A (Lepidosiren).
1907 A (Lepidosiren).
Arldt, T. 1907 D, 682 (Sirenoidea).
Bischoff, T. L. W. 1840 B, 116, pls. vi-x (Lepidosiren).
Carus, V. 1875 A, 594 (Sirenoidei).
Cope, E. D. 1891 N, 14 (Sirenoidei).
Eastman, C. R. 1906 D, 20 ("sirenoids").
1907 B, 23, 234 (Sirenoidei).
1908 A, 69 (Sirenoidei).
Edwards, A. M. 1840 A, 159 (Lepidosiren).
Gill, T. 1909 B, 838 (Sirenoidei).
Gregory, W. K. 1907 D, 447 (Sirenoidei).
Jordan, D. S. 1905 A, i, 612, 613 (Sirenoidei).
1907 B, 238, 239, 760 (Sirenoidei).
1923 A, 110 (Sirenoidei).
Kerr, J. G. 1901 B, 1 (Lepidosiren).
1902 A, 417 (Lepidosiren).
Kingsley, J. S. 1885 B, 300 (Dipneumona).
Lönnberg, E. 1902 A (Lepidosiren).
Owen, R. 1839 C, 327, pls. xxiii-xxvii (Lepidosiren).
Reynolds, S. H. 1897 A, 34, 70 (Sirenoidei).
Steinmann, G. 1907 A, 407 (Sirenoidea).
Traquair, R. H. 1878 A, 12 (Sirenoidei).
Wallace, A. R. 1876 A, ii, 458 (Sirenoidei).
Woodward, A. S. 1922 C, 77 (Sirenoidei).
Zittel and Woodward 1902 A, 64 (Sirenoidei).

CTENODONTIDÆ.

Hay, O. P. 1902 A, 353.
Arldt, T. 1912 A, 648, 658.
1923 A, 700 ("ctenodontiden").
Bridge, T. W. 1904 A, 505.
Cockerell, T. D. A. 1913 B, 121.
Cope, E. D. 1891 N, 15.
Eastman, C. R. 1907 B, 23.
1908 A, 210.
Goodrich, E. S. 1909 A, 257.
Gregory, W. K. 1907 D, 447.
Jordan, D. S. 1905 A, i, 613.
1907 B, 239, 760.
1923 A, 110.
Pompeckj, J. F. 1913 A, 1134.
Schlosser, M. 1917 A, 134 ("ctenodontiden").
Schmalhausen, J. J. 1913 A, 76.
Zittel and Koken 1911 A, 75, 76.
Zittel and Schlosser 1923 A, 81.
Zittel and Woodward 1902 A, 62.

CTENODUS Agassiz. Type *C. cristatus* Agassiz.

Hay, O. P. 1902 A, 353.
Abel, O. 1912 F, 491.
1919 A, 33, 181, fig. 7.
Arldt, T. 1907 D, 339.
1923 A, 701.
Atthey, T. 1868 C, 354.
Barkas, W. J. 1874 D, 550.
Bridge, T. W. 1897 A, 602.
Case, E. C. 1908 C, 576.
1926 B, 196.
Deecke, W. 1913 A, 73.
Etheridge, R. 1906 A, 130.
Eastman, C. R. 1906 A, 132.
1908 A, 211.
Giebel, C. G. 1855 A, 115.
Goodrich, E. S. 1904 A, 504.
1909 A, 239, fig. 209.
Gregory, W. K. 1915 D, 323.
Hussakof, L. 1908 C, 312.
1910 B, 306.
Jaekel, O. 1902 E, 1078.
Jordan, D. S. 1905 A, i, 613.
1907 B, 239.
1919 B, 191.
Kiaer, J. 1924 A, 93, fig. 40.
Koken, E. 1893 B, 252.
Miall, L. C. 1875 D, 436.
Moodie, R. L. 1923 B, 297.
Owen, R. 1849 D, 42.
Petronievics, B. 1919 A, 412.
Pompeckj, J. F. 1913 A, 1135.
Priem, F. 1908 B, 7.
Ridewood, W. G. 1896 A, 388.
Sewertzoff, A. N. 1923 B.
Stromer and Peyer 1926 A, 534.
1917 A, 38.
Traquair, R. H. 1878 A, 3.
1878 B, 483.
Watson and Day 1916 A, 31, 40, text-fig. 8.
Watson and Gill 1923 A, 163-215, figs. 8, 11, 12, 21-28.
Woodward, A. S. 1922 C, 78, fig. 79.
1924 A, 114.
Woodward, H. 1904 B, 141.
Zittel and Koken 1911 A, 75.
Zittel and Schlosser 1923 A, 81, fig. 139.
Zittel and Woodward 1902 A, 63.

Ctenodus wagneri Newb.

Hay, O. P. 1902 A, 353.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 19.
1908 A, 212, 213, 285.
Hussakof, L. 1908 A, 51.
Upper Devonian (Cleveland); Ohio.

Ctenodus sp. indet.

Eastman, C. R. 1902 B, 97. Pennsylvanian (Mazon Creek); Illinois.
1903 B, 194. Pennsylvanian (Mazon Creek); Illinois.

SAGENODUS Owen. Type *S. inæqualis* Owen.

Hay, O. P. 1902 A, 353.
Abel, O. 1919 A, 181.
Atthey, T. 1868 C, 357 (Saganodus).
Bronn, H. G. 1849 A, 649 (Ctenodus).
Case, E. C. 1926 B, 196.
Cockerell, T. D. A. 1911 C, 126.
1913 B, 121.
Delafontaine, M. 1877 A, 268 (Ctenodus).
Dollo, L. 1896 A.
Eastman, C. R. 1903 C, 493.
Hussakof, L. 1911 A, 163.
Jordan, D. S. 1905 A, i, 613.
1907 B, 239.
Stromer and Peyer 1917 A, 36.
Watson, D. M. S. 1916 B, 37, pl. iii, fig. 9.
Watson and Day 1916 A, 41.
Watson and Gill 1923 A, 163-215, figs. 1-12 14-20.
Zittel and Koken 1911 A, 76.
Zittel and Schlosser 1923 A, 82.
Zittel and Woodward 1902 A, 64.

Sagenodus copeanus Williston.

Hay, O. P. 1902 A, 354.
Abel, O. 1919 A, 180, fig. 139 (S. copei).
Eastman, C. R. 1903 B, 186.
Zittel and Schlosser 1923 A, 82, fig. 140 (S. copei).
Zittel and Koken 1911 A, 76, fig. 134 (S. copei).
Pennsylvanian (Missourian); Kansas.

Sagenodus cristatus Eastman.

Eastman, C. R. 1903 B, 188, 194, pl. iii, fig. 30.
Pennsylvanian (Mazon Creek); Illinois.

Sagenodus dialophus (Cope).

Hay, O. P. 1902 A, 354.
Beede, J. W. 1907 A, 119 (Ctenodus).
Case, E. C. 1915 A, 96.
Hussakof, L. 1911 A, 163, pl. xxvi, figs. 6, 7.
Permian (Wichita, Clear Fork); Texas: (Enid); Oklahoma.

Sagenodus foliatus Cope.

Hay, O. P. 1902 A, 354.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
Merrill, G. P. 1907 A, 18.
Pennsylvanian (Mazon Creek); Illinois.

Sagenodus fossatus (Cope).

Hay, O. P. 1902 A, 354 (S. fossatus, S. gurleyanus, S. porrectus); 355 (S. vabasensis).
Beede, J. W. 1907 A, 119 (Ctenodus).
Case, E. C. 1900 A, 705, pl. i, fig. 7 (S. vabasensis); fig. 8 (S. gurleyanus); fig. 10 (S. fossatus).
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, fig. 7, 8.
Hussakof, L. 1908 A, 54, fig. 26 (S. porrectus).
1911 A, 163, pl. xxvi, figs. 8-11, pl. xxvii, figs. 1-3.
1916 A, 131 (S. gurleyanus, S. porrectus, S. vabasensis as syns.).
Permian; Illinois.

Sagenodus heterolophus (Cope).

Hay, O. P. 1902 A, 354.
Case, E. C. 1900 A, 706.
Hussakof, L. 1911 A, 164, pl. xxvii, fig. 6.
Permian; Illinois.

Sagenodus jugosus Hay.

Hay, O. P. 1902 A, 354. Pennsylvanian; Ohio.

Sagenodus lacovianus Cope.

Hay, O. P. 1902 A, 354.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
Pennsylvanian (Mazon Creek); Illinois.

Sagenodus occidentalis (Newb. and Worth.).

Hay, O. P. 1902 A, 354.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
Merrill, G. P. 1907 A, 18 (S. browniæ); 19 (S. occidentalis).
Pennsylvanian; Illinois, Ohio.

Sagenodus ohioensis (Cope).

Hay, O. P. 1902 A, 354 (S. ohionensis).
Hussakof, L. 1916 A, 129, fig. 2 (S. ohiensis).
Pennsylvanian; Ohio.

Sagenodus paucicristatus (Cope).

Hay, O. P. 1902 A, 354.
Case, E. C. 1900 A, 707, pl. i, fig. 11.
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, fig. 9.
Hussakof, L. 1911 A, 164, pl. xxvii, fig. 4.
Pennsylvanian (Upper); Illinois.

Sagenodus periprion (Cope).

Hay, O. P. 1902 A, 354.
Beede, J. W. 1907 A, 119 (Ctenodus).
Case, E. C. 1915 A, 96.
Hussakof, L. 1911 A, 165, pl. xxvii, fig. 5.
Permian (Wichita? Clear Fork?); Texas.

Sagenodus quincunciatus Cope.

Hay, O. P. 1902 A, 355.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
Merrill, G. P. 1907 A, 19.
Pennsylvanian (Mazon Creek); Illinois.

Sagenodus reticulatus (Newb. and Worth.).

Hay, O. P. 1902 A, 355.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
Hussakof, L. 1916 A, 131 ("Ctenodus reticulatus").
Merrill, G. P. 1907 A, 19 (S. magister, S. reticulatus).
Pennsylvanian (Mazon Creek); Illinois.

Sagenodus serratus (Newb.).

Hay, O. P. 1902 A, 355.
Hussakof, L. 1908 A, 54.
1916 A, 130, 131, fig. 5.
Pennsylvanian; Ohio.

Sagenodus textilis Hay.

Hay, O. P. 1902 A, 355.
Eastmann, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
Merrill, G. P. 1907 A, 18 (S. gurleianus); 19 (S. textilis).
Pennsylvanian (Mazon Creek); Illinois.

Sagenodus vinslovii (Cope).

Hay, O. P. 1902 A, 355.
Case, E. C. 1900 A, 703, pl. i, fig. 6.
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, fig. 10.
Hussakof, L. 1911 A, 165, pl. xxvii, figs. 7, 8.
Permian (Wichita?, Clear Fork?); Texas: Pennsylvanian; Illinois.

Sagenodus sp. indet.

Case, E. C. 1902 B, 63. Permian; Oklahoma.

GNATHORHIZA Cope. Type *G. serrata* Cope.

Hay, O. P. 1902 A, 355.
Case, E. C. 1908 C, 579.
Hussakof, L. 1911 A, 166.

Gnathorhiza pertenuis (Eastman).

Eastman, C. R. 1903 C, 493, figs. 1, 2 (Sagenodus).
Broili, F. 1904 A, 105 (Sagenodus).
Case, E. C. 1908 C, 579 (Sagenodus).
Eastman, C. R. 1906 D, 8 (Sagenodus).
Hussakof, L. 1908 A, 53 (Sagenodus. Syn.? of G. pusilla).
1911 A, 167 (Syn. of G. pusilla).
Permian (Cimarron); Texas.

Gnathorhiza pusilla (Cope).

Hay, O. P. 1902 A, 355 (Sagenodus).
Case, E. C. 1900 A, 705, pl. i, fig. 9 (Sagenodus).
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, fig. 6 (Ctenodus, Gnathorhiza).
Hussakof, L. 1911 A, 167, pl. xxvii, fig. 10.
Permian; Illinois, Texas, Oklahoma.

Gnathorhiza serrata Cope.

Hay, O. P. 1902 A, 355.
Beede, J. W. 1907 A, 119.
Hussakof, L. 1908 A, 53, fig. 25.
1911 A, 167, pl. xxvii, fig. 9 (Syn. of G. pusilla).
Upper Pennsylvanian; Illinois: Permian (Wichita, Clear Fork); Texas.

CERATODONTIDÆ Gill.

Hay, O. P. 1902 A, 355.
Arldt, T. 1907 D, 644 (Ceratodidæ).
1912 A, 662, 663.
1923 A, 701 ("ceratodontiden").
Bridge, T. W. 1904 A, 507.
Cockerell, T. D. A. 1913 B, 121.
Cunningham, J. T. 1912 A, 246.
Eastman, C. R. 1907 B, 23.
Goodrich, E. S. 1909 A, 257 (Ceratodidæ).
Gregory, W. K. 1907 D, 447.
Hoernes, R. 1886 A, 558 (Ceratodidæ).
Jaekel, O. 1911 A, 78 (Ceratodonti).
Jordan, D. S. 1905 A, i, 613, ii, p. 562.
1907 B, 238, 239, 760.
1923 A, 110.
Kingsley, J. S. 1885 B, 300 (Sirenidæ).
Meek, A. 1916 A, 55.
Rauther, M. 1913 A, 1099.
Scharff, R. F. 1911 A, 379.
Stromer, E. 1916 A, 415.
Stromer and Peyer 1917 A, 1, 65.
Zittel and Koken 1911 A, 76.
Zittel and Schlosser 1923 A, 82.

CERATODUS Agassiz. Type *C. latissimus* Agassiz.

Hay, O. P. 1902 A, 355.
Abel, O. 1912 F, 664.
1919 A, 182.
1920 A, 341, fig. 540.
1921 A, 155.
Adams, L. A. 1919 A, 80.
Agar, W. E. 1906 A.
1907 A, 625.
Agassiz, L. 1844 C, 267.
1877 A, 124.
Aichel, O. 1919 A, 242.
Allis, E. P. 1898 A, 460.
1905 A, 487.
1909 A, 202.
1913 A, 324.
1915 A.
1917 A, 110.
1918 A, 244.
1923 B, 172.
Arldt, T. 1907 D, 644.
1923 A, 701.
Ayers, H. 1885 A, 479.
Backman, G. 1913 A, 47.
Baird, H. S. 1922 A, 115.
Bardeleben, K. 1901 A, 72.
1903 A, 21.
Barkas, W. J. 1874 D, 549.
Barrell, J. 1915 B, 407.
Beer, G. R. 1924 C, 320, figs. 32-35, 42.
1926 A, 303, figs. 68-72, 112.
Berry, E. W. 1925 A, 358.
Bicknell, E. 1872 A, 189.
Boas, J. E. V. 1914 B, 546, fig. 9.
1914 C, 231, figs. 1-3, 6.
Böklen, H. 1887 A, 76.
Braus, H. 1900 A, 45.
1901 A, 183.
1901 B, 137, pls. xxi-xxiii, xxvii.
1906 A, 197.
Bridge, T. W. 1878 A, 691.
1897 A, 602.
Briquel, P. 1898 A, 11.
Bronn, H. G. 1848 A, 259.
1849 A, 637.
Broom, R. 1913 A, 459.
Bruyere, H. 1901 A, 89, fig.
Case, E. C. 1908 C, 576.
Cockerell, T. D. A. 1908 C, 162.
Cope, E. D. 1891 N, 14, fig. 5.
Cunningham, J. T. 1912 A, 246.
Dabelow, A. 1926 A, 99, fig. 5.
Dean, B. 1902 A, 774.
1906 A, 168.
1907 A, 48.
Dean, Gudger, Henn 1923 A, 673.
Deecke, W. 1926 A, 186.
Delafontaine, M. 1877 A, 266.
Derjugin, R. 1910 A, 588.
1910 B, 207.
Dohrn, A. 1884 A, 180.
Dombrowski, B. A. 1925 A, 79.
Eastman, C. R. 1906 A, 132.
1907 B, 56, 88, 95, 96, 182.
1908 A, 211.
Edgeworth, F. H. 1923 A, 359, figs. 31-39.
1923 D, 325, figs. 1-39.
1925 A, 225, 227, 241, figs. 29-40.
1926 A, 173, figs. 21, 22.
Eisler, P. 1895 A, 235.
Emery, C. 1887 A, 185.
1895 A, 224.
Frassetto, F. 1915 A, fig. 25.
Fürbringer, M. 1902 A.
1904 A, 405.
1904 B, 423, pls. xxvii-xli.
Gaskell, W. H. 1908 A, 148.
Gaupp, E. 1905 D, 921.
1906 B, 683.
Gegenbaur, C. 1879 A, 522.
Gervais, P. 1852 A, explan. pl. lxxvii.
Giebel, C. G. 1855 A, 115, pl. xlvii, fig. 2.
Gill, T. 1876 A, 153.
Goodrich, E. S. 1901 A, 321, fig. K.
1904 A, 480.
1906 A, 335.
1909 A, 507, figs.
1924 A, 936.
Gregory, W. K. 1904 A, 55, 57, fig. 9.
1915 D, 323.
Hasse, C. 1893 B, 533.
Haswell, W. A. 1884 A, 81.
Hatschek, B. 1889 A, 88, fig. 4.
Heilprin, A. 1887 A, 413.
Hoernes, R. 1886 A, 558.
Howes, G. B. 1894 A, 83.
Humphreys, J. 1908 A, 14.
Hussakof, L. 1906 A, 127.
1910 B, 305.
1911 A, 166.
Huxley, T. H. 1876 E, 84, figs. 1-7.
1876 F, 165.
1880 E, 470.

Jacobshagen, E. 1920 A, 88.
Jaekel, O. 1927 A, 252, fig. 1.
Jaquet, M. 1897 A, 174.
1899 C, 241, pls. xlvi-li.
1900 A, 60.
Jordan, D. S. 1919 B, 191.
Kathariner, L. 1899 A, 345.
Kellicott, W. E. 1905 A, 131.
Kerr, J. G. 1900 A, 228.
1900 B, 298.
1902 A, 424.
1908 A, 169.
1908 B, 171.
Kingsbury, B. F. 1895 A, 135.
Kingsley, J. S. 1885 B, 299, figs. 167, 168.
1925 A, 115, 240, figs. 39, 121, 253.
Klaatsch, H. 1893 C, 146.
Koken, E. 1893 B, 268.
Krall, A. 1908 A, 578.
Kravetz, L. 1911 A, 332, pls. i, ii.
Lakjer, T. 1927 A, 190, 278, fig. 69.
Lavocat, A. 1896 B, 196.
Leunis and Ludwig 1883 A, 779.
Lull, R. S. 1917 B, 483.
Luther, A. 1913 B, 34, figs. 15, 17, 27.
McGregor, J. H. 1901 B, 447.
Mantell, G. A. 1844 A, 619.
Meek, A. 1916 A, 55, 57, 62, 402.
Miall, L. C. 1872 A, 30, 41.
Mivart, St. G. 1878 B, 309, 332, fig. 15.
Mollier, S. 1897 A, 3.
Mook, C. C. 1918 A, 468.
Nauck, E. T. 1926 B, 76.
Neumayer, L. 1904 A, 125, pl. xiv, fig. 14.
Osborn, H. F. 1905 N, 235.
1916 E, 607.
1917 B, 172.
Owen, R. 1845 B, 63.
1866 A, 369, 385.
Palacký, J. 1902 B, 141.
Parker and Bettany 1877 A, 87.
Parker and Haswell 1897 A, 230, figs. 853-862.
Peale, A. C. 1876 A, 153.
Pehrson, T. 1922 A, 10.
Perret, A. 1900 A, 786.
Petronievics, B. 1919 A, 407, 412.
Peyer, B. 1920 A, 109.
Philippi and Frech 1903 A, 11, pl. ii.
Pompeckj, J. F. 1913 A, 1134, fig. 41.
Priem, F. 1908 B, 6, pl. i, fig. 1.
Rabl, C. 1901 A, 477.
Reynolds, S. H. 1897 A, 535, figs. 19, 20.
Ridewood, W. G. 1894 A, 632, figs. 1-3.
1896 A, 388, fig. 19.
1921 A, 329.
Romer, A. S. 1924 A, 126, 128, figs. 6-10.
Scharff, R. F. 1911 A, 379.
Schauinsland, H. 1906 A.
Schlosser, M. 1898 D, 121.
1917 A, 135, 139.
Schmalhausen, J. J. 1913 A, 47.
1917 A, 109.
1923 A, 534, fig. 1.
Semon, R. 1898 A, 51, pls. xi-xvii; text-figs. 1-4.
1899 A, 294.
1901 A, 181.
Semon, R. 1901 B, 113, pls. xvii-xx; text-figs. a-d, k-m.
Sewertzoff, A. N. 1902 A, 593, figs. 1-5.
1908 A, 195.
1926 D, 77, figs. 5, 8, 19-21, 26.
Solas and Solas 1903 A, 287.
Solger, B. 1880 A, 365.
Sorensen, W. 1894 A, 135.
Starks, E. C. 1916 A, 13.
Steinmann, G. 1912 B, 726.
1927 A, 79.
Stensiö, E. A. 1921 A, 44, 136.
1925 B, 113, 162.
Stephan, P. 1900 A, 307.
Stromer, E. 1916 A, 409.
Stromer and Peyer 1917 A, 1-76.
Stur, D. 1886 A, 381.
Sushkin, P. P. 1927 A, 268, fig. 1.
Terra, P. 1911 A, 221.
Tims, H. W. M. 1903 A, 133.
Traquair, R. H. 1878 A.
1898 B, 46.
1900 C, 506.
Ussow, S. 1900 A, 182.
Vanhöffen, E. 1891 A, 134.
Van Wijhe, J. W. 1922 A, 293.
Watson, D. M. S. 1916 B, 33.
1925 A, 848.
1926 A, 200.
Watson and Day 1916 A, 31, text-fig. 8.
Watson and Gill 1923 A, 165-215, figs. 13, 19.
Wiedersheim, R. 1880 C, 123.
1892 A, 45.
Woodward, A. S. 1911 C, 46.
1921 A, 180.
1921 C, 180.
1922 C, 78, figs. 80, 81.
1924 A, 114, fig. 7.
Woodward, H. 1878 A, 17, pl. ii, fig. 2.
1904 B, 141.
Zittel and Koken 1911 A, 77.
Zittel and Schlosser 1923 A, 82, fig. 141.

Ceratodus americanus Knight.

Hay, O. P. 1902 A, 356.
Cockerell, T. D. A. 1908 C, 162.
Mook, C. C. 1916 A, 149.
Upper Jurassic or Lower Cretaceous (Morrison); Wyoming.

Ceratodus dorotheæ Case.

Case, E. C. 1921 B, 2, fig.
Case, E. C. 1921 C, 445.
1921 D, 338 ("Ceratodus").
1922 A, 445.
Triassic (Dockum); Texas.

Ceratodus eruciferus Cope.

Hay, O. P. 1902 A, 356.
Bowen, C. F. 1915 A, 118, 148, 150.
Brown, B. 1914 E, 378 (Rhineastes).
Cockerell, T. D. A. 1908 C, 162.
Hatcher, J. B. 1905 B, 68.
Hay, O. P. 1903 D, 120.
Hussakof, L. 1908 A, 50.
Lambe, L. M. 1902 A, 29 (Rhineastes).
1904 C, 22, 36, 44 (Rhineastes).

Matthew, W. D. 1916 A, 484 (Rhineastes cruciferus).
Osborn, H. F. 1902 I, 11.
Stromer, E. 1906 A, 207.
Cretaceous (Judith River); Montana: Belly River); Alberta.

Ceratodus favosus Cope.

Hay, O. P. 1902 A, 356.
Beede, J. W. 1907 A, 119.
Case, E. C. 1915 A, 96.
Hussakof, L. 1908 A, 51, fig. 23.
1911 A, 166, pl. xxiii, fig. 11.
Permian (Wichita, Clear Fork); Texas.

Ceratodus güntheri Marsh.

Hay, O. P. 1902 A, 356.
Cockerell, T. D. A. 1908 C, 162.
Gilmore, C. W. 1914 A, 25.
Marsh, O. C. 1878 A, 184, fig.
Mook, C. C. 1916 A, 149 (C. guntheri).
Simpson, G. G. 1926 E, 2.
Upper Jurassic or Lower Cretaceous (Morrison); Colorado.

Ceratodus robustus Knight.

Hay, O. P. 1902 A, 356.
Cockerell, T. D. A. 1908 C, 162.
Mook, C. C. 1916 A, 149.
Upper Jurassic or Lower Cretaceous (Morrison); Wyoming.

Ceratodus sp. indet.

Freudenberg, W. 1921 A, 111. Upper Cretaceous; Mexico.
Mook, C. C. 1916 A, 96. Upper Jurassic or Lower Cretaceous (Morrison); Wyoming.

SYNTHETODUS Eastman. Type *S. trisulcatus* Eastman.

Hay, O. P. 1902 A, 356.
Eastman, C. R. 1908 A, 231.
1917 A, 246.
Sauvage, H. E. 1899 A, 7.

Synthetodus calvini Eastman.

Eastman, C. R. 1908 A, 213, 233, 287, pl. ii, fig. 19, pls. x-xii.
Hussakof and Bryant 1919 A, 15, 17, 150, pl. lv, figs. 1, 2.
Upper Devonian (State Quarry and Sweetland Creek); Iowa: (Genesee); New York.

Synthetodus trisulcatus Eastman.

Hay, O. P. 1902 A, 356.
Eastman, C. R. 1907 B, 20.
1908 A, 213, 231, 286, pls. ix, xi.
Sauvage, H. E. 1899 A, 7.
Upper Devonian (State Quarry and Sweetland Creek); Iowa.

ACMONIODUS Hussakof and Bryant. Type *A. clarkei* Hussakof and Bryant.

Hussakof and Bryant 1919 A, 151.
Woodward, A. S. 1921 B, 36.
A genus of uncertain position.

Acmoniodus clarkei Hussakof and Bryant.

Hussakof and Bryant 1919 A, 13, 151, pl. lv, fig. 3; text-fig. 53.
Upper Devonian (Genesee); New York.

Subclass CROSSOPTERYGIA Cope.

When the authors quoted use the masculine plural ending this is indicated thus: (-ii).

Hay, O. P. 1902 A, 357.
Abel, O. 1919 A, 158, fig. 170.
1920 A, 338 (-ii).
1921 A, 214, 247 ("crossopterygier").
1922 F, (-ii).
Allis, E. P. 1905 A, 417 (Crossopterygidæ).
1909 A, 202.
1918 A, 242 (-ii).
1919 A, 374 (-ii).
1919 B, 73.
1922 A, 150 (-ii).
1923 B, 156 (-ii).
1926 A, 169 (-ii).
Anthony, R. 1912 A ("crossoptérygiens").
1913 A, 269 ("crossoptérygiens").
Arldt, T. 1907 D, 648.
1923 A, 491 ("crossopterygier").
Bardeleben, K. 1896 A, 113 ("crossopterygier").
1901 A, 70 ("crossopterygier").
1907 A, 36 ("crossopterygier").
Barrell, J. 1915 B, 402, 406 (-ii).
Bender, O. 1907 A, 39 ("crossopterygier")
Bender, O. 1910 A, 122 ("crossopterygier").
Boas, J. E. V. 1914 B, 542 ("crossopterygier").
Boulenger, G. A. 1901 D, 2 (-ii).
1917 C, 458 ("crossoptérygiens").
Braus, H. 1901 B, 209, 244 ("crossopterygier").
1904 A, 411 ("crossopterygier").
Bridge, T. W. 1878 A, 723 (-ii).
1904 A, 476, 737 (-ii).
Broom, R. 1913 B, 465 ("crossopterygians").
Bryant, W. L. 1919 A, 4, 22 (-ii).
Carus, V. 1875 A, 693 (-ii).
Case, E. C. 1915 A, 124 ("crossopterygians").
Chamberlin, T. C. 1900 A, 411 ("crossopterygians").
Collinge, W. E. 1893 B, 259.
Cope, E. D. 1871 T, 449, 450.
1891 N, 19.
Cunningham, J. T. 1897 A, 497 ("crossopterygians").
1912 A, 246, 251, 254 (-ii).
Dean, B. 1900 A, 8, 29 (-ii).
1916 A ("fishes").
Dean, Gudger, Henn 1923 A, 676 (-ii).
Dollo, L. 1906 B, 137 ("crossoptérygiens").

Eastman, C. R. 1901 C, 329 (-ii).
1904 C, 141 ("crossopterygians").
1905 A, 54 (-ii).
1907 B, 23, 165 (-ii).
1908 A, 62, 69, 237, 255 (-ii).
1911 A, 20 (-ii).
1916 A, 655 (-ii).
1916 B, 104 (-ii).
1917 A, 244, 270 (-ii).
Eastman and Barbour 1902 A, 267 ("crossopterygians").
Eimer, G. H. T. 1901 A, 254 ("crossopterygier").
Emery, C. 1887 A, 187 ("crossopterygier").
1895 A, 226 ("crossoptérygiens").
Fuchs, H. 1907 C, 26 ("crossopterygier").
Fürbringer, K. 1903 A, 377 ("crossopterygier").
Fürbringer, M. 1902 A, 198 ("crossopterygier").
Gadow, H. 1902 B, 359 (-ii).
Gill, T. 1898 A, 697 ("crossopterygians").
1905 A, 658 (-ii).
1909 B, 838 (-ii).
Goodrich, E. S. 1904 A, 499 (-ii).
1908 A, 765 (-ii).
1908 B, 546 (-ii).
1909 A, 280 (Osteolepidoti).
Gregory, W. K. 1907 D, 447, 456 (-ii).
1911 A, 509 ("crossopterygians").
1911 B, 892 ("crossopterygians").
1912 D, 220 (-ii).
1913 D, 806, 807 (-ii).
1914 C, 267 (-ii).
1915 D, 318, 325, 353 (-ii).
1920 A, 219 (-ii).
1922 A, 10 ("crossopterygians").
1927 G, 267 ("crossopterygians").
Hase, A. 1907 A, 653 ("crossopterygier").
Haswell, W. A. 1884 A, 80 ("crossopterygians").
Hertwig, O. 1879 A, lxxx (Polypterus).
Hilzheimer, M. 1913 A, 472 ("crossopterygier").
Hoernes, R. 1866 A, 550 (-ii).
Hubbs, C. L. 1919 A, 670 (Amphibioidei, part).
Hussakof, L. 1906 A, 124 ("crossopterygians").
Huxley, T. H. 1861 D, 442, 444 (Crossopterygidæ).
1866 B, 23 (Crossopterygidæ).
1876 E, 112 (-ii); p. 121 (Crossopterygidæ).
Jacobshagen, E. 1920 A, 90 ("crossopterygier").
Jaekel, O. 1902 A, 108 ("crossopterygier").
1909 A, 198 ("crossopterygier").
1911 A, 69, 75 (-ii).
Jordan, D. S. 1903 A, 136 ("crossopterygians").
1905 A, I, 598; II, 565 (-ii).
1907 B, 224, 759 (-ii).
1923 A, 108 (-ii).
Kellicott, W. E. 1905 A, 137 (-ii).
Kerr, J. G. 1900 A, 233.
1901 A, 694 ("crossopterygians").
1908 B, 170 ("crossopterygians").
1910 A, 203 ("crossopterygians").
1923 A, 108 (-ii).
Keyes, C. A. 1922 A, pl. iii.
Kiaer, J. 1924 A, 92, 111, 116 (-ii).
Kingsley, J. S. 1885 A, 95 (-ii).
1901 B, 338 (-ii).
1925 A, 100 (-ii).
Koken, E. 1893 B, 351 ("crossopterygier").
Lakjer, T. 1927 A ("crossopterygier").
Leunis and Ludwig 1883 A, 776 (-ii).
Lönnberg, E. 1901 A (Crossopterygidæ).
Lubosch, W. 1911 B, 748 ("crossopterygier").
Lütken, C. 1868 C (Crossopteri).
1871 A, 290 ("crossoptères").
Lull, R. S. 1917 B, 486 (-ii).
Luther, A. 1913 B, 10, 18, 51 (-ii).
Meek, A. 1916 A, 48, 54 (-ii).
Möllier, S. 1897 A, 3 ("crossopterygians").
Moodie, R. L. 1913 A, 183 ("crossopterygians").
1915 G, 371.
1915 H, 637, 641.
1926 A, 83.
Nauck, E. T. 1926 B, 70 ("crossopterygier").
Osborn, H. F. 1916 E, 601 (-ii).
1917 B, 174, 186.
Oswald, F. 1911 A, 409.
Parker and Haswell 1897 A, 202 (-ii).
Pehrson, T. 1922 A ("crossopterygians").
Pompeckj, J. F. 1913 A, 1135 (-ii).
Priem, F. 1908 B, 5 ("crossoptérygiens").
Rabl, C. 1901 A, 489 ("crossopterygier").
Rauther, M. 1913 A, 1099 (-ii).
Regan, C. T. 1904 A, 330, 331, 336 (-ii).
1908 D, 47 ("crossopterygians").
1909 B, 76 (-ii).
Reynolds, S. H. 1897 A, 33, 67, 68, 116.
Romer, A. S. 1924 A, 121 (-ii).
Rosén, N. 1916 A, 15, 30 (-ii).
Ryder, J. 1885 E, 96.
1886 A, 74, 77 (-ii).
Sagemehl, M. 1884 A, 20 ("crossopterygier").
Schauinsland, H. 1906 A, 455 ("crossopterygier").
Schlosser, M. 1917 A, 133, 138, 147 ("crossopterygier").
Schmalhausen, J. J. 1913 A, 18 ("crossopterygier").
1913 B, 757 ("crossopterygier").
1913 C (-ii).
1916 B, 147 (-ii).
1917 A, 110.
Schuchert, C. 1915 A, 690 (-ii).
Scupin, H. 1896 A, 153, 180 (-ii).
Semon, R. 1901 A, 180 ("crossopterygier").
1901 B, 130 ("crossopterygier").
Sewertzoff, A. N. 1923 B (-ii).
1924 A, 551-580, figs. i-xiv (Polypterus).
1926 A, 508.
1926 C, 42 (-ii).
1926 D, 76 (-ii).
1926 E, 552 ("crossopterygians").
1926 F, 274 (-ii).
Shitkov, B. M. 1899 A, 256 ("crossopterygier").
Smith, G. E. 1912 A, 427 (-ii).
Steinmann, G. 1907 A, 408 (-ii).
1927 A, 76 ("crossopterygier").
Stensiö, E. A. 1918 A, 117 ("crossopterygians").
1921 A, 43 (-ii).
1922 A, 1241 ("crossopterygians").
1925 A, 131.
1925 B, 161, 187 (-ii).
Stromer, E. 1905 C, 184 (-ii).
1912 A, 29 (-ii).
1920 A, 12, 15 (-ii).
1925 B, 355, 364 (-ii).
Sushkin, P. P. 1910 A, 250 (-ii).

Sushkin, P. P. 1927 A, 264 (-ii).
Thevenin, A. 1910 A, 35 ("crossopterygiens").
Traquair, R. H. 1870 A, 179 ("crossopterygians").
1877 B, 8 (-ii).
1880 A, 157 (Crossopterygidæ).
1900 C, 505 (-ii).
1905 A, 85 (-ii).
Versluys, J. 1912 B, 552 ("crossopterygier").
Vogel, R. 1909 A, 501 ("crossopterygier").
Watson, D. M. S. 1912 A ("crossopterygians").
1913 D, 26 (-ii).
Watson and Day 1916 A, 21 ("crossopterygians").
Wintrebert, P. 1910 B, 78 ("crossoptérygiens").
Woodward, A. S. 1906 A, 313 (-ii).
1906 C, 273.
1909 A, 324 ("crossopterygians").
1910 B, 464 ("crossopterygians").
Woodward, H. 1878 A, 22 (Crossopterygidæ).
1915 B, lxxi.
1922 B, 27.
1922 C, 82 (-ii).
1924 A, 116 (-ii).
Zittel and Koken 1911 A, 85 (-ii).
Zittel and Schlosser 1923 A, 84 (-ii).
Zittel and Woodward 1902 A, 69 (-ii).

Order RHIPIDISTIA Cope.

Hay, O. P. 1902 A, 357.
Allis, E. P. 1919 A, 377.
Case, E. C. 1924 B, 7.
Cope, E. D. 1891 N, 19.
Eastman, C. R. 1907 B, 23.
1908 A, 69.
Goodrich, E. S. 1909 A, 284.
Gregory, W. K. 1915 D, 326.
Gregory and Adams 1915 A, 763.
Jaekel, O. 1911 A, 75 (Holoptychii).
Jordan, D. S. 1905 A, i, 602.
Jordan, D. S. 1907 B, 228, 760.
1923 A, 108.
Osborn, H. F. 1916 E, 608, fig. 18.
Scupin, H. 1896 A, 154, 181 (Cyclodipterini)
Stensiö, E. A. 1918 A, 116.
1921 A, 129, 131, 140, 147.
1922 A, 1259, 1267 ("rhipidistids").
1925 A, 69, 91 ("rhipidistids").
Sewertzoff, A. N. 1923 B.
Watson, D. M. S. 1917 B, 49.
Watson and Day 1916 A, 26.

Suborder OSTEOLEPIDIFORMES, new name.

Boulenger, G. A. 1901 D, 2 (Osteolepida).
Bridge, T. W. 1904 A, 477 (Osteolepida).
Dean, Gudger, Henn 1923 A, 622 (Osteolepida).
Gregory, W. K. 1907 D, 448 (Osteolepida).
1912 D, 220 (Osteolepida).
Huene, F. 1926 A, 261 ("osteolepiden").
Jaekel, O. 1911 A, 79 (Osteolepidi); 76 (Onychodonti).
Sewertzoff, A. N. 1923 B, 118 (Osteolepidæ).

HOLOPTYCHIIDÆ Owen.

Owen, R. 1860 E, 132 (Holoptychidæ).
Hay, O. P. 1902 A, 358.
Abel, O. 1919 A, 163.
Arldt, T. 1912 A, 648, 658.
1923 A, 491 ("holoptychiden").
Barrell, J. 1915 B, 393.
Bridge, T. W. 1904 A, 479, 743 (Holoptychidæ).
Clarke, J. M. 1895 A, 121.
Dean, Gudger, Henn 1923 A, 622.
Eastman, C. R. 1907 B, 23, 165.
1908 A, 238.
1917 A, 237.
Goodrich, E. S. 1904 A, 501.
1909 A, 284.
Gregory, W. K. 1907 D, 448.
1915 D, 355.
Jordan, D. S. 1905 A, i, 603; ii, 575.
1907 B, 229.
1922 A, 108.
Lütken, C. 1871 A, 290 ("cyclodiptériens").
Pompeckj, J. F. 1913 A, 1135, 1136.
Rohon, J. V. 1889 A, 13 (Rhombodipterini).
Schlosser, M. 1917 A, 133 ("holoptychiden").
Sewertzoff, A. N. 1923 B, 119.
Stensiö, E. A. 1918 A, 117.
Stromer, E. 1905 H, 216.
Terra, P. 1911 A, 206 (Holoptychidæ).
Traquair, R. H. 1900 C, 505.
Watson and Day 1916 A, 26 (Holoptychidæ).
Zittel and Koken 1911 A, 85.
Zittel and Schlosser 1923 A, 84.
Zittel and Woodward 1902 A, 69.

HOLOPTYCHIUS Agassiz. Type *H. nobilissimus* Agassiz.

Hay, O. P. 1902 A, 358.
Abel, O. 1919 A, 164, figs. 116, 120.
1921 A, 248, fig. 89.
Agassiz, L. 1839 A, 599, pl. ii, figs. 1-4, 8 (Holoptychus).
1844 C, 269.
1877 A, 124 (Holoptichus).
Barkas, W. J. 1874 D, 551.
Braus, H. 1901 B, 231, fig. 20.
Bridge, T. W. 1904 A, 479, 743, fig. 277.
Bronn, H. G. 1848 A, 594.
1849 A, 654.
Bryant, W. L. 1919 A, 8.
Claypole, E. W. 1883 C, 281.
Cunningham, J. T. 1912 A, 254, fig. 23.
Darton, N. H. 1906 A, 563.
Davies, W. 1863 A, 135.
Deecke, W. 1913 A, 88.
Eastman, C. R. 1908 A, 239.
1908 B, 166.
Egerton, P. G. 1852 C, 6 L, 5.
Eichwald, E. 1840 A, 78 (Holoptychus).
Frech, F. 1897 A, 82, 123.
Giebel, C. G. 1855 A, 113.

Goodrich, E. S. 1908 A, 765.
1909 A, 281, 284, figs.
Gregory, W. K. 1915 D, 329.
1920 A, 219.
Heckel, J. 1851 A, 221.
Heilprin, A. 1887 A, 149, 301.
Hoernes, R. 1886 A, 551.
Hussakof, L. 1906 A, 143.
Huxley, T. H. 1861 D, 425, fig. 4 ("ganoids").
Jordan, D. S. 1919 B, 194 (Holoptychus).
Klaatsch, H. 1890 A, 221.
Knipe, H. R. 1912 A, 40, fig. 40.
Lütken, C. 1868 C, 55, fig. 8.
Mantell, G. A. 1844 A, 653.
Miall, L. C. 1872 A, 28, 40.
Miller, H. 1857 A, 247, figs. 99, 100.
Moodie, R. L. 1926 A, 67, 83, 94, pl. xi.
Murchison, R. I. 1854 A, 245, pl. xxxvi, figs. 9-13.
Osborn, H. F. 1916 E, 606, fig. 14.
1917 B, 170, fig.
Owen, R. 1866 A, 378.
Pehrson, T. 1922 A, 57.
Pompeckj, J. F. 1913 A, 1136, fig. 42.
Regan, C. T. 1904 A, 339.
Reynolds, S. H. 1897 A, 105.
Schmalhausen, J. J. 1913 A, 75.
Schuchert and Levene 1927 A, 266, fig.
Scupin, H. 1896 A, 154.
Sewertzoff, A. N. 1924 A, 579.
1926 A, 523.
Traquair, R. H. 1880 A, 156.
1898 B, 46.
Watson, D. M. S. 1912 B, 586.
1913 F, 957.
1916 B, 2, pl. ii, fig. 7; text-fig. 1.
1925 A, 821, 823.
Watson and Day 1916 A, 2, 21, pl. ii, fig. 7; text-fig. 1.
Woodward, A. S. 1890 F, 147.
1900 H, 1.
1906 C, 273, fig. 6.
1913 B, 82, pl. x, figs. 1, 2.
1915 B, lxxi.
1921 A, 181.
1922 B, 28, fig. 1.
1922 C, 82, figs. 85, 86.
Young, J. 1866 C, 317.
Zittel and Koken 1911 A, 86.
Zittel and Schlosser 1923 A, 85, figs. 143, 144.

Holoptychius americanus Leidy.

Hay, O. P. 1902 A, 358.
Claypole, E. W. 1883 B, 531.
1883 C, 279.
1903 A, 319.
Clarke and Ruedemann 1903 A, 767.
Eastman, C. R. 1904 B, 258.
1907 B, 21, 22, 167, 230.
1908 A, 239, 288, 290.
Hussakof, L. 1908 A, 55.
Hussakof and Bryant 1919 A, 175.
White, I. C. 1883 A, 459.
Upper Devonian (Catskill); Pennsylvania: (Chemung); New York: Devonian; Colorado.

Holoptychius filosus Cope.

Hay, O. P. 1902 A, 358.
Eastman, C. R. 1907 B, 21, 168.
1908 A, 239, 288.
Hussakof, L. 1908 A, 56.
Upper Devonian (Chemung); Pennsylvania.

Holoptychius flabellatus Cope.

Hay, O. P. 1902 A, 358.
Eastman, C. R. 1908 A, 239.
1908 B, 168.
Merrill, G. P. 1907 A, 12.
Upper Devonian (Catskill); Pennsylvania.

Holoptychius giganteus Agassiz.

Agassiz, L. 1843 B (1835), ii, pt. i, 175, pl. xix, fig. 13 (Gyrolepis).
Unless otherwise indicated, the authors, as quoted, apply to this species the name *H. nobilissimus;* but it is antedated by *giganteus.*
Agassiz, L. 1839 A, 600, pl. ii, *bis,* figs. 1, 2.
1844 B, 72, pl. xxii, fig. 2 (H. murchisoni).
Cross, W. 1905 C, 4 ("Holoplychius." This species?).
Eichwald, E. 1860 A, 1572.
Hussakof and Bryant 1919 A, 175 (H. giganteus); 176 (H. nobilissimus).
Lohest, M. 1888 A, 127, 139 (H. nob.); 134, pl. i, fig. 5; pl. ii, figs. 1-4; pl. iii, figs. 1, 3, 5, 6; pl. v, figs. 1-3 (H. dewalquei).
M'Coy, F. 1855 A, 595.
Miller, H. 1841, Old Red Sandst., 162, pl. ix, fig. 2 (*Fide* A. S. Woodward).
Traquair, R. H. 1890 F, 388.
Woodward, A. S. 1891 A, 323.
1900 H, 1, pl. i, figs. 1-10.
Upper Devonian, Scotland, Belgium, Russia, East Greenland: Upper Devonian (Elbert); Colorado.

Holoptychius granulatus Newb.

Hay, O. P. 1902 A, 358.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 21, 168.
1908 A, 239, 288.
Upper Devonian (Chemung); Pennsylvania.

Holoptychius hallii Newb.

Hay, O. P. 1902 A, 358.
Claypole, E. W. 1903 A, 319 (H. halli).
Clarke and Ruedemann 1903 A, 767 (H. halli).
Eastman, C. R. 1907 B, 22, 168.
1908 A, 239, 290.
Hussakof and Bryant 1919 A, 176.
Upper Devonian (Catskill); New York.

Holoptychius latus Cope.

Hay, O. P. 1902 A, 358.
Eastman, C. R. 1907 B, 168.
1908 A, 239.
1908 B, 168.
Merrill, G. P. 1907 A, p. 12.
Upper Devonian (Catskill); Pennsylvania.

Holoptychius princeps M'Coy.

M'Coy, F. 1848 C, 310.
Unless otherwise indicated, the following authors call this species *H. giganteus;* but the specific name had been previously applied by Agassiz to another species.
Hay, O. P. 1902 A, 358.
Claypole, E. W. 1903 A, 319 (This species?).
Eastman, C. R. 1904 B, 257, fig. 5.
1907 B, 20, 21, 22, 167.
1908 A, 239, 287, 288, 290.
1915 A, 280.
Hussakof, L. 1906 A, 150.
1908 A, 56 (This species?).
Murchison, R. I. 1854 A, pl. xxxvi, fig. 11.
Upper Devonian (Chemung, Catskill); New York, Pennsylvania: (Elbert); Colorado: Europe?).

Holoptychius? pustulosus Newb.

Hay, O. P. 1902 A, 358.
Claypole, E. W. 1903 A, 319 (This species?).
Eastman, C. R. 1907 B, 22, 168.
1908 A, 239, 288.
Hussakof, L. 1908 A, 56 (This genus?).
Upper Devonian (Chemung); Pennsylvania.

Holoptychius radiatus Newb.

Hay, O. P. 1902 A, 359.
Claypole, E. W. 1903 A, 319 (This species?).
Eastman, C. R. 1907 B, 22.
1908 A, 290.
Hussakof, L. 1908 A, 56.
Upper Devonian (Catskill); Pennsylvania.

Holoptychius scheii Kiaer.

Kiaer, J. 1915 A, 44, 47, pl. viii, figs. 3, 4.
Upper Devonian?; Ellesmere Land.

Holoptychius serrulatus Cope.

Hay, O. P. 1902 A, 359.
Eastman, C. R. 1908 A, 239.
1908 B, 168.
Hussakof and Bryant 1919 A, 176.
Merrill, G. P. 1907 A, 12.
Upper Devonian (Catskill); Pennsylvania.

Holoptychius tuberculatus Newb.

Hay, O. P. 1902 A, 359.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1904 B, 258, fig. 6.
1907 B, 20, 22, 168.
1908 A, 239, 287, 289.
1915 A, 280.
Hussakof, L. 1908 A, 57.
Kiaer, J. 1915 A, 45 (This species?).
Upper Devonian (Chemung); Pennsylvania; Ellesmere Land.

Holoptychius sp. indet.

Cross, W. 1905 C, 5. Upper Devonian (Elbert); Colorado.
1910 A, 5. Upper Devonian (Elbert); Colorado.
Eastman, C. R. 1907 B, 15. Middle Devonian; New York.
1908 A, 279. Devonian; Iowa, New York, Greenland.
Jordan, D. S. 1907 A, 120. Triassic; California.
Lull, R. S. 1918 A, 361. Devonian; Arizona.
Norton, W. H. 1906 A, 356. Middle Devonian (Cedar Valley); Iowa.

Glyptolepis Agassiz. Type *G. leptopterus* Agassiz.

Agassiz, L. 1844 B, 61, 62.
Hay, O. P. 1902 A, 358 (Holoptychius, in part).
Abel, O. 1919 A, 164, fig. 121.
Agassiz, L. 1844 B, 62 (in part).
Bronn, H. G. 1848 A, 537.
1849 A, 654.
Eastman, C. R. 1907 B, 166.
1908 A, 238.
Goodrich, E. S. 1909 A, 285.
Hoernes, R. 1886 A, 551.
Huxley, T. H. 1861 D, 426, fig. 7.
Jaekel, O. 1909 D, 718, fig. 10.
1911 A, 76, fig. 77.
Miller, J. 1859 A, 31.
Nicholson and Lydekker 1889 A, 969.
Oswald, F. 1911 A, 407, fig. 7.
Parker and Haswell 1897 A, 227, fig. 850.
Powrie, J. 1862 A, 435.
Scupin, H. 1896 A, 155.
Sewertzoff, A. N. 1926 D, 90.
Watson, D. M. S. 1916 B, 7, pl. ii, fig. 8.
Watson and Day 1916 A, 7, pl. ii, fig. 8.
Woodward, A. S. 1898 B, 72, 74.
Zittel, K. A. 1890 A, 179.
Zittel and Schlosser 1923 A, 85, fig. 8 (Syn. of Holoptychius).

Glyptolepis paucidens (Agassiz).

Agassiz, L. 1844 B, 61, 78, pl. xxxviii, fig. 11 (Platygnathus).
Kiaer, J. 1915 A, 45, 55, pl. viii, figs. 1, 2 (This species?).
Traquair, R. H. 1888 B, 513.
1890 H, 483.
Woodward, A. S. 1891 B, 336 [Holoptychius (Glyptolepis)].
Upper Devonian (Lower Old Red); Orkneys: Upper Devonian?; Ellesmere Land.

Glyptolepsis quebecensis Whiteaves.

Hay, O. P. 1902 A, 358 (Holoptychius).
Bryant, W. L. 1919 A, 5, pl. xvi, fig. 1 (Holoptychius).
Clark, J. M. 1913 A, 115 (Holoptychius).
Claypole, E. W. 1883 C, 278.
Eastman, C. R. 1907 B, 17 (Holoptychius); 166 (Glyptolepis).
1908 A, 238.
Hussakof and Bryant 1919 A, 174, text-fig. 58.
Kiaer, J. 1915 A, 46.
Lambe, L. M. 1904 C, 17, 34, 42 (Holoptychius).
Whiteaves, J. F. 1907 B, 253 (Holoptychius).
Upper Devonian (Scaumenac); Quebec.

APEDODUS Leidy. Type *A. priscus* Leidy.

Hay, O. P. 1902 A, 359.
Eastman, C. R. 1907 B, 166 (Syn.? of Holoptychius).
1908 A, 238 (Syn.? of Holoptychius).
Jordan, D. S. 1919 B, 283 (Syn.? of Dendrodus).

Apedodus priscus Leidy.

Hay, O. P. 1902 A, 359.
Claypole, E. W. 1903 A, 319.
Eastman, C. R. 1907 B, 21, 166, 225, pl. i, figs. 1, 2.
1908 A, 238.
Upper Devonian (Chemung); Pennsylvania.

DENDRODUS Owen. Type *D. biporcatus* Owen.

Hay, O. P. 1902 A, 359.
Agassiz, L. 1843 A (1844).
Barkas, W. J. 1874 D, 550.
Giebel, C. G. 1855 A, 114.
Heilprin, A. 1887 A, 301.
Huxley, T. H. 1861 D, 431, 436.
Lohest, M. 1888 A, 116.
Mantell, G. A. 1844 A, 653.
Owen, R. 1845 B, 171.
1866 A, 367, figs. 245, 246.
Röse, C. 1897 A, 49, 61.
Rohon, J. V. 1889 B, 3, pls. i, ii; text-fig. ii.
Stensiö, E. A. 1918 A, 116.
Tomes, C. S. 1898 C, 347.
Traquair, R. H. 1880 A, 149, 157.

Dendrodus arisaigensis Whiteaves.

Hay, O. P. 1902 A, 359.
Eastman, C. R. 1907 B, 13.
1908 A, 276.
Lambe, L. M. 1904 C, 15, 33, 42.
1912 A, 3.
Silurian or Lower Devonian (Arisaig); Nova Scotia.

ERIPTYCHIUS Walcott. Type *E. americanus* Walcott.

Hay, O. P. 1902 A, 359.
Clarke, J. M. 1895 A, 121 ("fossil fishes").
Jordan, D. S. 1905 A, I, 578; II, 568.
Stromer, E. 1920 A, 10, 11.
Vaillant, L. 1902 A, 1321 ("poissons").
Walcott, C. D. 1891 A, 245 ("fish").

Eriptychius americanus Walcott.

Hay, O. P. 1902 A, 359.
Cockerell, T. D. A. 1908 C, 162.
Eastman, C. R. 1907 B, 12.
Jaekel, O. 1892 C, 168 ("fish remains").
1895 D, 162.
Jordan, D. S. 1907 B, 229.
Merrill, G. P. 1907 A, 11.
Ordovician; Colorado.

MEGALICHTHYIDÆ Hay.

Unless otherwise indicated, the writers, as cited, use the name Rhizodontidæ.
Hay, O. P. 1902 A, 359 (Megalichthyidæ).
Abel, O. 1919 A, 165.
Allis, E. P. 1922 A, 149.
Arldt, T. 1912 A, 648, 650.
Bridge, T. W. 1904 A, 478.
Dean, Gudger, Henn 1923 A, 622.
Dollo, L. 1896 A, 91.
Eastman, C. R. 1907 B, 23.
Goodrich, E. S. 1904 A, 500.
1909 A, 285.
Gregory, W. K. 1907 D, 448.
1915 D, 326.
Jordan, D. S. 1905 A, i, 603, ii, p. 580 (Megalichthyidæ).
1907 B, 229, 760 (Megalichthyidæ).
1923 A, 108 (Megalichthyidæ).
Schlosser, M. 1917 A, 133 ("rhizodontiden").
Schmalhausen, J. J. 1913 A, 55.
Stensiö, E. A. 1918 A, 117.
Traquair, R. H. 1900 C, 505.
Zittel and Koken 1911 A, 86.
Zittel and Schlosser 1923 A, 85 (Rhizodontidæ).
Zittel and Woodward 1902 A, 70.

MEGALICHTHYS Agassiz and Hibbert. Type *M. hibberti* Agassiz and Hibbert.

Hay, O. P. 1902 A, 359.
Agassiz, L. 1835 A, 646 (Megalichthys; descript. insufficient).
1835 C, 58.
1835 D, 190.
1844 C, 269.
Bronn, H. G. 1848 A, 709.
Case, E. C. 1917 A, 125 (Rhizodus).
Connell, A. 1835 A, 302.
1835 B, 191.
Goodrich, E. S. 1908 A, 755, fig. 197.
Gregory, W. K. 1915 D, 326 (Rhizodus).
Humphreys, J. 1908 A, 12 (Rhizodus).
Jordan, D. S. 1919 B, 185.
1923 A, 108.
Murchison, R. I. 1854 A, 281.
Stevenson, J. J. 1907 A, 168 (Rhizodus).
Traquair, R. H. 1878 C, 444 (Rhizodus).
1878 D, 657 (Rhizodus).
1880 A, 142, 149 (Rhizodus).
1908 A, 104 (Rhizodus).
Watson, D. M. S. 1913 F, 957 (Rhizodus).
Woodward, A. S. 1890 F, 147 (Rhizodus).
1911 C, p. 46 (Rhizodus).
1915 B, lxxi (Rhizodus).
Young, J. 1866 C, 317 (Rhizodus).
Zittel and Koken 1911 A, 86 (Rhizodus).
Zittel and Schlosser 1923 A, 86, fig. 146 (Rhizodus).
Zittel and Woodward 1902 A, 70 (Rhizodus).

Megalichthys anceps (Newb.).

Hay, O. P. 1902 A, 360.
Hussakof, L. 1908, 58 (Rhizodus).
Mississippian (St. Louis); Illinois.

Megalichthys angustus (Newb.).

Hay, O. P. 1902 A, 360. Pennsylvanian; Ohio.

Megalichthys incurvus (Newb.).

Hay, O. P. 1902 A, 360. Pennsylvanian; Ohio.

Megalichthys lancifer (Newb.).

Hay, O. P. 1902 A, 360.
Lambe, L. M. 1904 C, 19, 35, 43 (Rhizodus. This species?).
Whiteaves, J. F. 1903 B, 29 (Rhizodus. This species?).
Coal Measures; Nova Scotia.

Megalichthys ornatus (Traquair).

Traquair, R. H. 1878 D, 659 (Rhizodus).
Cockerell, T. D. A. 1913 A, 246 (Rhizodus. This species?).
Miall, L. C. 1875 B, 624, fig. ("Rhizodus").
Traquair, R. H. 1875 B, 266 (Rhizodus hibberti).
Woodward, A. S. 1891 A, 346, pl. xii, figs. 1-4 (Rhizodus).
Young, J. 1866 B, 599 ("Rhizodus").
Ordovician; Colorado.

Megalichthys sp. indet.

Bell, W. A. 1913 A, 343 (Rhizodus). Pennsylvanian (Joggins); Nova Scotia.

STREPSODUS Young. Type *Holoptychius sauroides* Binney; not of Williamson.

Hay, O. P. 1902 A, 360.
Leriche, M. 1908 B, 270.
Stensiö, E. A. 1918 A, 118.
Wellburn, E. D. 1900 C, 86, pl. xviii.
Zittel and Woodward. 1902 A, 71.

Strepsodus arenosus Hay.

Hay, O. P. 1902 A, 360.
Merrill, G. P. 1907 A, 20.
Mississippian; Pennsylvania.

Strepsodus dawsoni Hay.

Hay, O. P. 1902 A, 360.
Lambe, L. M. 1904 C, 19, 35, 43.
Pennsylvanian; Nova Scotia.

Strepsodus hardingi (Dawson).

Hay, O. P. 1902 A, 360.
Lambe, L. M. 1904 C, 18, 34, 43.
1910 B, 14 (This species?).
1909 B, 177 (Rhizodus).
Woodward, A. S. 1900 E, 203.
1902 D, 203.
Mississippian (Albert); Nova Scotia.

Strepsodus sp. indet.

Eastman, C. R. 1907 B, 21. Devonian; New York or Pennsylvania.
1908 A, 288. Devonian; New York or Pennsylvania.

RHIZODOPSIS Young. Type *Holoptychius sauroides* Williamson.

Hay, O. P. 1902 A, 360.
Allis, E. P. 1919 B, 75.
Atthey, T. 1868 C, 349, 364.
Broom, R. 1913 A, 461.
Gregory, W. K. 1913 D, 806.
1927 G, 268, fig. 1.
Jordan, D. S. 1919 B, 344.
Stensiö, E. A. 1921 A, 131.
Traquair, R. H. 1878 C, 444.
1900 C, 505.
Watson, D. M. S. 1913 F, 957.
1916 B, 12, pl. i, fig. 2; text-figs. 3, 4.
Watson and Day 1916 A, 12, 24; text-figs. 3, 4.
1926 A, 250.
Wills, L. J. 1916 A, 19.
Woodward, A. S. 1898 B, 74, 124, fig. 57.
Zittel and Koken 1911 A, 86.
Zittel and Schlosser 1923 A, 86, fig. 147.
Zittel and Woodward 1902 A, 71.

Rhizodopsis? mazonius Hay.

Hay, O. P. 1902 A, 361.
Eastman, C. R. 1902 B, 97 (This genus?).
1902 G, 541 (This genus?).
1903 B, 194 (This genus?).
Merrill, G. P. 1907 A, 18.
Pennsylvanian (Mazon Creek); Illinois.

SAURIPTERIS Hall. Type *S. taylori* Hall.

Hay, O. P. 1902 A, 361.
Broom, R. 1913 A, 463, fig. 6.
Dean, Gudger, Henn 1923 A, 550 (Sauripterus).
Eastman, C. R. 1917 A, 252.
Gregory, W. K. 1911 A, 509.
1912 D, 220.
1913 D, 807 (Sauripterus).
1914 C, 267.
1915 D, 353, fig. 11.
Gregory, Miner, and Noble 1923 A, 279.
Jordan, D. S. 1919 B, 214.
Kingsley, J. S. 1925 A, 244, fig. 258.
Lydekker, R. 1914 A, 652.
Sewertzoff, A. N. 1926 D, 83, fig. 11 (Sauripterus).
Stensiö, E. A. 1918 A, 118 (Sauripterus).
Wills, L. J. 1916 A, 19.
Zittel and Koken 1911 A, 87.
Zittel and Schlosser 1923 A, 86, fig. 30.
Zittel and Woodward 1902 A, 71 (Gyroptychius).

Sauripteris taylori Hall.

Hall, J. 1843 A, 282, pl. iii, figs. 1-3; text-figs. 130, 131.
Hay, O. P. 1902 A, 361.

Broom, R. 1913 A, 461, figs. 2-5.
1913 H, 76, figs. 3, 4.
Claypole, E. W. 1883 C, 279 (Bothriolepis).
1903 A, 320.
Eastman, C. R. 1907 B, 22, 166.
1908 A, 238, 290.
1917 A, 252, pl. ii, fig. 2; pl. vii, fig. 5; text-figs. 6, 7.
Gregory, W. K. 1915 D, 360, pl. iv; text-fig. 9.
Hussakof, L. 1908 A, 58, figs. 27, 28.
Hussakof and Bryant 1919 A, 180.
Lull, R. S. 1917 B, 488, fig. 141.
Moodie, R. L. 1915 G, 371.
Upper Devonian (Catskill); Pennsylvania.

EUSTHENOPTERON Whiteaves. Type *E. foordii* Whiteaves.

Whiteaves, J. F. 1881 C, 30.
Hay, O. P. 1902 A, 361.
Allis, E. P. 1923 A, 50.
Bridge, T. W. 1904 A, 479, 740.
Broom, R. 1913 A, 459, fig. 1.
Bryant, W. L. 1919 A, 1.
Dean, Gudger, Henn 1923 A, 461, 551, 622.
Dollo, L. 1896 A, 91.
Frech, F. 1897 A, 123 (Eustenopteron).
Goodrich, E. S. 1901 A, 311.
1904 A, 500.
1908 A, 766.
1909 A, 509.
1924 A, 936.
Gregory, W. K. 1911 A, 509.
1913 D, 807.
1915 D, 353, fig. 11.
1920 A, 219.
Gregory, Miner, and Noble 1923 A, 279.
Jordan, D. S. 1920 C, 418 (Eusthenopleuron).
1923 A, 108.
Kiaer, J. 1924 A, 93, 111, fig. 40.
Lydekker, R. 1914 A, 652.
Moodie, R. L. 1915 H, 643.
Petronievics, B. 1918 B, 471, figs. 1, 2.
Pompeckj, J. F. 1913 A, 1136.
Regan, C. T. 1904 A, 336.
Romer, A. S. 1922 B, 541, 544.
Schmalhausen, J. J. 1913 A, 54.
1913 B, 757.
Sewertzoff, A. N. 1925 A, 277.
Stensiö, E. A. 1921 A, 129, 133.
1925 A, 68.
1925 B, 145.
Sushkin, P. P. 1910 A, 251.
1927 A, 264, 265, 280.
Thevenin, A. 1910 A, 37.
Traquair, R. H. 1900 C, 505.
Watson, D. M. S. 1913 D, 26.
1916 B, 25.
1917 B, 61 (Euthenopteron).
1925 A, 846, 847.
Watson, D. M. S. 1926 A, 195, 248, figs. 4, 5, 34, 35.
Watson and Day 1916 A, 23.
Watson and Gill 1923 A, 215.
Whiteaves, J. F. 1907 B, 253.
1908 A, 105.
Woodward, A. S. 1922 B, 29.
Zittel and Koken 1911 A, 87.
Zittel and Schlosser 1923 A, 86, fig. 30*g*.

Eusthenopteron foordii Whiteaves.

Whiteaves, J. F. 1881 C, 30.
Hay, O. P. 1902 A, 361.
Abel, O. 1919 A, 166, fig. 124.
Bridge, T. W. 1904 A, 479, fig. 276.
Broom, R. 1922 B, 459, fig. 7.
Bryant, W. L. 1919 A, 1-23, pls. i-xviii.
Clarke, J. M. 1913 A, 113.
Claypole, E. W. 1883 C, 278.
Eastman, C. R. 1907 B, 17.
1908 A, 280.
Goodrich, E. S. 1901 A, 311, pl. xvi; text-fig. F.
1909 A, 509, figs.
Gregory, W. K. 1915 D, 359, fig. 8.
1922 A, 535, figs. 3-5.
Hussakof, L. 1912 B, 131, fig. 2.
Hussakof and Bryant 1919 A, 176, pl. lxx, fig. 2.
Jaekel, O. 1909 D, 719, fig. 11.
1911 A, 76, fig. 78.
Lambe, L. M. 1904 C, 14, 34, 43.
1912 A, 5.
Moodie, R. L. 1913 A, 255.
Oswald, F. 1911 A, 407, fig. 8.
Pehrson, T. 1922 A, 55, fig. 22 (E. fordii).
Rogers, A. F. 1924 A, 546.
Schmalhausen, J. J. 1913 A, 54.
Stensiö, E. A. 1921 A, 133, fig. 57.
1922 A, 1249, fig. 4 (E. fordi).
Watson and Day 1916 A, 19.
Whiteaves, J. F. 1907 B, 254.
Woodward, A. S. 1922 B, 30, fig. 2.
Upper Devonian (Scaumenac); Quebec.

RABDIOLEPIS Emmons. Type *R. speciosa* Emmons.

Hay, O. P. 1902 A, 360.
Deecke, W. 1913 A, 72 (Rhabdolepis).
Jordan, D. S. 1919 B, 275.
Tornquist, A. 1904 A, 349 (Rhabdolepis).

Rabdiolepis speciosa Emmons.

Hay, O. P. 1902 A, 360.
Hawkins, A. C. 1914 A, 153 (Radiolepis).
Lyman, B. S. 1894 A, 212 (Radiolepis).
Triassic (Newark); North Carolina, Pennsylvania.

CŒLOSTEUS Newb. Type *C. ferox* Newb.

Hay, O. P. 1902 A, 361.
Belongs possibly among the sharks and rays.

Cœlosteus ferox Newb.

Hay, O. P. 1902 A, 361.
Hussakof, L. 1908 A, 29.
Mississippian (St. Louis); Illinois.

OSTEOLEPIDIDÆ Cope.

Cope, E. D. 1889 R, 856 (Osteolepididæ).
Hay, O. P. 1902 A, 361 (Osteolepidæ).
Abel, O. 1919 A, 161 (Osteolepidæ).
Allis, E. P. 1919 A, 378 (Osteolepidæ).
1919 B, 76 (Osteolepidæ).
Arldt, T. 1907 D, 679 (Rhombodipterini).
1912 A, 648, 658 (Osteolepidæ).
1923 A, 491 ("osteolepiden").
Bridge, T. W. 1904 A, 477 (Osteolepidæ).
Case, E. C. 1926 B, 196 (Osteolepidæ).
Dean, Gudger, Henn 1923 A, 401, 622 (Osteolepidæ).
Dollo, L. 1896 A, 91 (Osteolepidæ).
Goodrich, E. S. 1904 A, 499 (Osteolepidæ); 500 Glyptopomidæ).
1908 A, 760, 765 (Osteolepidæ).
1909 A, 285 (Glyptopomidæ).
1919 A, 181 (Osteolepidæ).
Gregory, W. K. 1912 D, 220 (Osteolepida).
1915 D, 326, 355 (Osteolepidæ).
Huxley, T. H. 1861 D, 431, 442 (Saurodipterini).
Jordan, D. S. 1905 A, i, 603 (Osteolepidæ).
1907 B, 229, 760 (Osteolepidæ).
1923 A, 109 (Osteolepidæ).
Lütken, C. 1871 A, 290 ("rhombodipteriens").
Pompeckj, J. F. 1913 A, 1135, 1136 (Osteolepidæ); 1137 (Glyptopomidæ).
Rosén, N. 1916 A, 17 ("osteolepidote").
Schlosser, M. 1917 A, 133 ("osteolepiden").
Steinmann, G. 1927 A, 77 ("osteolepiden").
Stensiö, E. A. 1918 A, 117 (Osteolepidæ).
Stromer, E. 1905 H, 216 (Osteolepidæ).
Sushkin, P. 1927 A, 264 ("osteolepids").
Traquair, R. H. 1900 C, 505 (Osteolepidæ).
Watson, D. M. S. 1914 F, 780 ("osteolepids").
1921 A, 333 ("osteolepids").
1925 A, 816-868 ("osteolepids").
1926 A, 195, 243, figs. 1-3 ("osteolepids").
Watson and Day 1923 A, 210 ("osteolepids").
Zittel and Koken 1911 A, 87 (Osteolepidæ).
Zittel and Schlosser 1923 A, 87 (Osteolepidæ).
Zittel and Woodward 1902 A, 71 (Osteolepidæ).

OSTEOLEPIS Valenciennes. Type *O. macrolepidotus* Agassiz.

Valenciennes, A. 1829, Trans. Geol. Soc. Lond. (2), iii, 144.
Abel, O. 1919 A, 162, fig. 118.
1920 A, 339, fig. 537.
Agassiz, L. 1833 A, 472.
Allis, E. P. 1919 B, 75.
1922 B, 239.
Bryant, W. L. 1919 A, 6, 8.
Egerton, P. G. 1852 C, 6 L, 5.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1919 A, 181, figs. 1-6.
1924 A, 935.
Gregory, W. K. 1913 D, 806.
1919 B, 422, fig. 1.
1920 A, 111, 219, figs. 1, 2.
1922 A, 542, fig. 346.
Heilprin, A. 1887 A, 149, 301.
Huxley, T. H. 1861 D, 433, fig. 8.
Jaekel, O. 1903 F, 37.
Kiaer, J. 1915 A, 48, 55.
Kingsley, J. S. 1925 A, 103, fig. 110.
Klaatsch, H. 1890 A, 144, 220.
Miller, H. 1851 A, 91.
Osborn, H. F. 1916 E, 605, fig. 14.
1917 B, 170, fig.
Pehrson, T. 1922 A, 52.
Pompeckj, J. F. 1920 A, 110.
Rohon, J. V. 1889 A, 13, pl. ii.
Scupin, H. 1896 A, 153, pl. ix, fig. 1.
Steinmann, G. 1907 A, 409, fig. 715.
Stensiö, E. A. 1921 A, 133.
1922 A, 1258.
Traquair, R. H. 1880 A, 150, 151.
Watson, D. M. S. 1916 B, 20, text-fig. 5.
1921 A, 334.
1925 B, 385, fig. 1.
1926 A, 205, 242.
Watson and Day 1916 A, 20, text-fig. 5.
Woodward, A. S. 1891 A, 368.
1922 B, 28.
Zittel and Schlosser 1923 A, 87, fig. 148.

Osteolepis sp. indet.

Kiaer, J. 1915 A, 48. Upper Devonian; Ellesmere Land.

PARABATRACHUS Owen. Type *P. colei* Owen.

Hay, O. P. 1902 A, 362.
Bardeleben, K. 1907 A, 36 (Megalichthys).
Barkas, T. P. 1869 A, 43 (Parabatrachus, Megalichthys).
Bronn, H. G. 1849 A, 661 (Megalichthys).
Broom, R. 1913 H, 77 (Megalichthys).
Case, E. C. 1908 C, 579 (Ectosteorhachis).
Day, H. 1915 A, 430 (Megalichthys).
Gregory, W. K. 1913 D, 805 (Ectosteorachis, Megalichthys).
1915 D, 326, fig. 7 (Megalichthys).
Humphreys, J. 1908 A, 13 (Megalichthys).
Hussakof, L. 1911 A, 168 (Megalichthys).
Huxley, T. H. 1861 D, 433 (Megalichthys).
Jordan, D. S. 1905 A, i, 604.
1907 B, 230.
1919 B, 254.
Lakjer, T. 1927 A, 210 (Megalichthys).
M'Coy, F. 1848 A, 3 (Centrodus; not of Giebel, 1847).
Owen, R. 1845 B, 76 (Megalichthys).
1876 E, 45.
Rosén, N. 1916 A, 16, fig. 8 (Megalichthys).
Schlosser, M. 1917 A, 133.
Stensiö, E. A. 1921 A, 131 (Megalichthys).
Sushkin, P. P. 1927 A, 265, 280, fig. 2 (Megalichthys).
Watson, D. M. S. 1912 A, 5 (Megalichthys).
1913 F, 957 (Megalichthys).
1921 A, 334 (Megalichthys).
1926 A, 242, 245, figs. 32, 33, 36-39 (Megalichthys).
Woodward, A. S. 1911 C, 46 (Megalichthys).
1915 B, lxxi (Megalichthys).
1924 A, 116, fig. 8.
Zittel and Schlosser 1923 A, 87 (Megalichthys).
Zittel and Woodward 1902 A, 71 (Megalichthys).

Parabatrachus ciceronius (Cope).

Hay, O. P. 1902 A, 362.
Beede, J. W. 1907 A, 119.
Case, E. C. 1915 A, 96 (Megalichthys).
Hussakof, L. 1911 A, 169 (Megalichthys).
Permian (Wichita? Clear Fork?); Texas.

Parabatrachus macropomus (Cope).

Hay, O. P. 1902 A, 362.
Eastman, C. R. 1903 B, 187 (Megalichthys).
Merrill, G. P. 1907 A, 13 (Megalichthys).
Pennsylvanian; Kansas.

Parabatrachus maxillaris (Agassiz).

Hay, O. P. 1902 A, 362.
Etheridge, R. 1878 A, 269 (Megalichthys hibberti).
Goodrich, E. S. 1909 A, 217, fig. 190 (Megalichthys hibberti).
Lambe, L. M. 1904 C, 19, 35, 43.
Pennsylvanian; Nova Scotia.

Parabatrachus nitidus (Cope).

Hay, O. P. 1902 A, 362.
Beede, J. W. 1907 A, 119.
Case, E. C. 1915 A, 96 (Megalichthys).
Cope and Matthew 1915 A, pl. i (Ectosteorhachis; Megalichthys=Palæobatrachus).
Gregory, W. K. 1915 D, 360 (Megalichthys).
Hussakof, L. 1908 A, 58.
1911 A, 169, pl. xxx, figs. 1-4; pl. xxxi, fig. 3; text-fig. 53 (Megalichthys).
Permian (Wichita); Texas.

GLYPTOPOMUS Agassiz. Type *G. minor* Agassiz.

Hay, O. P. 1902 A, 362.
Abel, O. 1919 A, 53, fig. 26.
Allis, E. P. 1919 B, 76.
1922 B, 239.
Bryant, W. L. 1919 A, 8.
Goodrich, E. S. 1904 A, 500.
1909 A, 510, figs.
Huxley, T. H. 1859 E, 444.
1861 D, 424, fig. 4.
1866 B, 20, pl. i.
Pompeckj, J. F. 1913 A, 1136.
Rosén, N. 1916 A, 17.
Stensiö, E. A. 1918 A, 120.
1921 A, 133.
Suschkin, P. P. 1927 A, 264.
Watson, D. M. S. 1916 B, 8, pl. i, figs. 4, 5; text-fig. 2.
Watson and Day 1916 A, 8, 21, pl. i, figs. 4, 5; text-fig. 2.
Woodward, A. S. 1890 F, 147.
Zittel and Koken 1911 A, 87.
Zittel and Schlosser 1923 A, 87.

Glyptopomus sayrei Newb.

Hay, O. P. 1902 A, 362.
Claypole, E. W. 1903 A, 320.
Eastman, C. R. 1907 B, 22.
1908 A, 290.
Upper Devonian (Catskill); Pennsylvania.

SPERMATODUS Cope. Type *S. pustulosus* Cope.

Cope, E. D. 1894 F, 438.
Hay, O. P. 1902 A, 795.
Hussakof, L. 1911 A, 172.
The systematic position of this genus is extremely doubtful.

Spermatodus pustulosus Cope.

Cope, E. D. 1894 F, 438, text-fig. 4.
Hay, O. P. 1902 A, 795.
Case, E. C. 1915 A, 96.
Hussakof, L. 1908 A, 101.
1911 A, 172, pl. xxxii.
Permian (Wichita? Clear Fork?); Texas.

ONYCHODONTIDÆ Woodward.

Hay, O. P. 1902 A, 362.
Abel, O. 1919 A, 166.
Eastman, C. R. 1907 B, 23, 168.
1908 A, 240.
Goodrich, E. S. 1909 A, 286.
Jordan, D. S. 1907 B, 230, 760.
1923 A, 109.
Zittel and Koken 1911 A, 87.
Zittel and Schlosser 1923 A, 87 (Onychodidæ).

ONYCHODUS Newberry. Type *O. sigmoides* Newb.

Hay, O. P. 1902 A, 363.
Barkas, W. J. 1874 D, 551.
Bryant, W. L. 1919 A, 11.
Claypole, E. W. 1903 A, 312.
Eastman, C. R. 1902 B, 157.
1907 B, 164, 168, 193, 232.
1908 A, 240.
Hussakof and Bryant 1919 A, 178.
Jaekel, O. 1900 A, 145.
1906 B, 76.
1927 B, 338.
Newberry, J. S. 1870 E, 18.
1873 G, 145.
Norton, W. H. 1906 A, 357.
Storms, R. 1891 A, 143, 145.
Traquair, R. H. 1898 A, 68.
Weller, S. 1902 A, 427, 429.
Woodward, A. S. 1889 K, 407.
1890 F, 147.

Onychodus hopkinsi Newb.

Hay, O. P. 1902 A, 363 (O. sigmoides, in part).
Claypole, E. W. 1903 A, 320.
Eastman, C. R. 1907 B, 169, 230, pl. iii, fig. 3.
1908 A, 241, pl. i, fig. 3.
Upper Devonian (Chemung, Marcellus); New York.

Onychodus ortoni Newb.

Hay, O. P. 1902 A, 363.
Claypole, E. W. 1896 B, 353.
1903 A, 320.
Eastman, C. R. 1907 B, 19.
1908 A, 285.
Zittel and Koken 1911 A, 88, fig. 157.
Zittel and Schlosser 1923 A, 88, fig. 151.
Upper Devonian (Huron); Ohio.

Onychodus sigmoides Newb.

Hay, O. P. 1902 A, 363.
Arey, M. F. 1906 A, 425, fig. 48.
Branson, E. B. 1922 A, 35, 164, pl. xxxi, fig. 3.
Clarke and Luther 1904 A, 42.
Claypole, C. W. 1903 A, 320.
Cleland, H. F. 1911 A, 157, pl. xlvii, fig. 5 (This species?).
Eastman, C. R. 1907 B, 14, 16, 168, 232, pl. i, fig. 3.
1908 A, 240, 279.
Hussakof, L. 1908 A, 57.
Hussakof and Bryant 1919 A, 10, 15, 17, 178, pl. lviii; text-fig. 59.
Lambe, L. M. 1904 C, 16, 34, 43.
1912 A, 4.
Moodie, R. L. 1926 A, 66.
Newberry, J. S. 1874 H, 192.
Newberry, J. S. 1889 A, 56, pl. xxxiv.
Orton, E. 1878 A, 610, 625 (O. sigmoides); 636 (O. hopkinsi).
Stauffer, C. R. 1909 A, 88, 124, 169.
Whiteaves, J. F. 1877 A, 319.
Zittel and Koken 1911 A, 88, fig. 156.
Zittel and Schlosser 1923 A, 87, fig. 150.
Upper Devonian (Genesee); New York: Middle Devonian (Hamilton); Wisconsin: (Callaway); Missouri: (Cedar Valley); Iowa: (Columbus and Delaware); Ohio: (Onondaga); New York: (Corniferous); Ontario.

Onychodus sp. indet.

Hay, O. P. 1902 A, 363.
Eastman, C. R. 1907 B, 16, 169. Middle Devonian (Cedar Valley); Iowa; pl. iii, fig. 2 (O. sigmoides?): Devonian (Hamilton); New York.
1908 A, 241, 279. Devonian; Wisconsin, New York.
Lambe, L. M. 1904 C, 34. Devonian (Cuboides); Manitoba.
Norton, W. H. 1906 A, 356. Middle Devonian (Cedar Valley); Iowa.
Teller, E. E. 1911 A, 271. Devonian (Hamilton); Wisconsin.
Tyrrell, J. B. 1892 A, 209. Upper Devonian; Manitoba.

Order ACTINISTIA Cope.

Hay, O. P. 1902 A, 363.
Cope, E. D. 1871 T, 451.
1891 N, 19.
Eastman, C. R. 1908 A, 69, 241.
1908 B, 357.
1911 A, 20.
Goodrich, E. S. 1909 A, 287 (Cœlacanthini).
1913 A, 83 (Cœlacanthini).
Gregory, W. K. 1907 D, 448.
1920 A, 220.
Jordan, D. S. 1905 A, i, 602, 604.
1907 B, 228, 230, 760.
Sewertzoff, A. N. 1923 B.

CŒLACANTHIDÆ King.

King, W. 1850 A, 235.
Hay, O. P. 1902 A, 363.
Abel, O. 1912 F, 445 456 ("cœlacanthiden").
1919 A, 167.
Agassiz, L. 1844 D, 142 ("cœlacanthes").
Allis, E. P. 1919 A, 376.
1922 A, 149.
1923 A, 41, 51.
Arldt, T. 1907 D, 646 (Cœlacanthini).
1912 A, 662, 663.
1923 A, 491 ("cœlacanthiden").
Boulenger, G. A. 1902 B, 296, 298.
Bridge, T. W. 1904 A, 480.
Bronn, H. G. 1849 A, 781, seq. (Cœlacanthi).
Carus, V. 1875 A, 593 (Cœlacanthini).
Cockerell, T. D. A. 1913 B, 120.
Cope, E. D. 1891 N, 19.
Cunningham, J. T. 1912 A, 258.
Dean, Gudger, Henn 1923 A, 460, 551, 622.
Deecke, W. 1926 A, 194 ("cœlacanthiden").
Eastman, C. R. 1905 B, 101.
1908 A, 242.
1911 A, 28, 42.
Egerton, P. G. 1854 A, 369 (Cœlacanthi).
Fitzinger, L. J. 1873 A, 50 (Cœlacanthi).
Goodrich, E. S. 1901 A, 316.
1904 A, 501 (Cœlacanthidæ).
Goodrich, E. S. 1908 A, 766.
1909 A, 290.
Gregory, W. K. 1907 D, 448.
Günther, A. C. 1872 A, 559 ("cœlacanths").
Hay, O. P. 1901 B, 72.
Hoernes, R. 1886 A, 551.
Huxley, T. H. 1861 D, 435, 440, 444 (Cœlacanthini).
1862 A, L ("cœlacanths").
1866 B, 24, 63 (Cœlacanthini).
Jaekel, O. 1906 B, 76 ("cœlacanthiden").
Jordan, D. S. 1905 A, i, 605.
1907 B, 760.
1923 A, 109.
Kiaer, J. 1924 A, 111 (Cœlacanthini).
Klaatsch, H. 1890 A, 221 ("cœlacanthinen").
Lütken, C. 1868 C (Cœlacanthi).
1871 A, 291 ("célacanthiens").
Owen, R. 1860 E, 131 (Cœlacanthi).
Pehrson, T. 1922 A, 40 ("cœlacanths").
Pompeckj, J. F. 1913 A, 1135, 1136.
Schlosser, M. 1917 A, 133, 134, 136, 138, 139 ("cœlacanthiden").
Schmalhausen, J. J. 1913 A, 55.
Sewertzoff, A. N. 1923 B (Cœlacanthini).
1922 B, 167 ("cœlacanthiden").
Steinmann, G. 1927 A, 12 ("cœlacanthiden").

Stensiö, E. A. 1918 A, 120 ("cœlacanthids").
1921 A, 43, 120.
1922 A, 1259 ("cœlacanthids").
1925 A, 65, 68, 176, 182 ("cœlacanthids").
1925 B, 162, 172.
1927 A, 32.
Stromer, E. 1925 B, 356 (Cœlacanthini).
Traquair, R. H. 1880 A, 158.
1900 C, 505.
1905 A, 85.
Watson, D. M. S. 1921 A, 333 ("cœlacanths").
Watson, D. M. S. 1925 A, 847, 849 ("cœlacanths").
1926 A, 200, 245 ("cœlacanths").
1927 A, 454 ("cœlacanths").
Whitehouse, R. H. 1910 B, 609.
Woodward, A. S. 1898 A, 78.
1922 B, 28 ("cœlacanths").
1922 C, 83.
Zittel and Koken 1911 A, 88.
Zittel and Schlosser 1923 A, 88.
Zittel and Woodward 1902 A, 72.
Zograf, N. 1887 A, 70 (Cœlacanthi).

CŒLACANTHUS Agassiz. Type *C. granulatus* Agassiz.

Hay, O. P. 1902 A, 363.
Alessandri, G. 1910 A, 37.
Arldt, T. 1923 A, 491.
Barkas, W. J. 1874 D, 549 (Cœlacanthus); 550 (Conchiopsis).
Bridge, T. W. 1904 A, 736.
Bronn, H. G. 1848 A, 318.
1849 A, 655.
Case, E. C. 1917 A, 125.
Cockerell, T. D. A. 1913 B, 121.
Davis, J. W. 1880 C, 60, 67.
Dean, Gudger, Henn 1923 A, 461, 622.
Deecke, W. 1913 A, 80.
Dollo, L. 1896 A, 91.
Dormitzer, M. 1852 A, 61.
Eastman, C. R. 1903 B, 189.
1908 A, 244, 246.
1908 B, 357.
1915 B, 440.
1917 A, 270.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1908 A, 766.
1909 A, 289.
Heckel, J. J. 1850 A, 362, 365.
Heilprin, A. 1887 A, 301, 302.
Huxley, T. H. 1861 D, 435, 437.
1862 A, li.
1866 B, 23, pls. ii-v.
Jaekel, O. 1903 A, 119.
Jordan, D. S. 1905 A, II, 604.
1907 B, 231.
Lütken, C. 1868 C, 56, fig. 9.
Osburn, R. C. 1907 A, 425.
Priem, F. 1908 B, 5.
Reis, O. M. 1900 A, 187.
Stensiö, E. A. 1921 A, 44, 120.
Traquair, R. H. 1880 A, 158.
1905 A, 85.
Watson, D. M. S. 1921 A, 333.
1926 A, 199, 245.
Wellburn, E. D. 1901 A, 71.
1901 B, 161.
1902 A, 474, fig.
Woodward, A. S. 1898 G, 529, fig.
Zittel and Koken 1911 A, 88.
Zittel and Schlosser 1923 A, 88.
Zittel and Woodward 1902 A, 72.

Cœlacanthus banffensis Lambe.

Lambe, L. M. 1916 B, 38, pl. i.
Raymond, P. E. 1925 B, 553.
Triassic? (Upper Banff); Alberta.

Cœlacanthus elegans Newb.

Hay, O. P. 1902 A, 364.
Eastman, C. R. 1917 A, 271, pl. ix, figs. 5, 6; pl. xi, figs. 3, 4.
Hussakof, L. 1908 A, 54, pl. iv, fig. 1.
Hussakof and Bryant 1919 A, 181.
Jordan, D. S. 1907 B, 230, fig. 164.
Reis, O. M. 1900 A, 191.
Pennsylvanian; Ohio.

Cœlacanthus exiguus Eastman.

Eastman, C. R. 1902 G, 538, 541, fig. 3.
Eastman, C. R. 1902 B, 97.
1903 B, 189, 194, pl. v, fig. 48.
1917 A, 271, pl. x, fig. 1.
Pennsylvanian (Mazon Creek); Illinois.

Cœlacanthus ornatus Newb.

Hay, O. P. 1902 A, 364.
Eastman, C. R. 1917 A, 271.
Hussakof, L. 1908 A, 54, pl. iv, fig. 2.
Pennsylvanian; Ohio.

Cœlacanthus robustus Newb.

Hay, O. P. 1902 A, 364.
Cockerell, T. D. A. 1913 B, 120.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
Pennsylvanian (Illinois); Ohio.

Cœlacanthus welleri Eastman.

Eastman, C. R. 1908 B, 358, fig. 1.
Alessandri, G. 1910 A, 37.
Eastman, C. R. 1908 A, 247, pl. iii, fig. 7; text-fig. 36.
1911 A, 44.
1917 A, 270.
Van Tuyl, F. M. 1925 A, 55, 62.
Mississippian (Kinderhook); Iowa.

Cœlacanthus sp. indet.

Eastman, C. R. 1908 C, 255. Mississippian (Kinderhook); Iowa.

DIPLURUS Newb. Type *D. longicaudatus* Newb.

Hay, O. P. 1902 A, 364.
Deecke, W. 1913 A, 74.
1926 A, 194.
Eastman, C. R. 1905 B, 101.
1911 A, 21, 44.
Stensiö, E. A. 1921 A, 45, 129.

Diplurus longicaudatus Newb.

Hay, O. P. 1902 A, 364.
Bayley, Kümmel and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 101.
1911 A, 28, 44.
Hussakof, L. 1908 A, 55.
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 209, 214.
Woodward, A. S. 1890 E, 367.
Triassic (Newark); New Jersey.

PEPLORHINA Cope. Type *P. anthracina* Cope.

Hay, O. P. 1902 A, 364.
Barkas, W. J. 1874 D, 552.
Jordan, D. S. 1919 B, 368.

Peplorhina anthracina Cope.

Hay, O. P. 1902 A, 364.
Hussakof, L. 1911 A, 170.
Pennsylvanian; Ohio.

Peplorhina exanthematica Cope.

Hay, O. P. 1902 A, 364.
Pennsylvanian; Ohio.

TARRASIIDÆ Traquair.

Traquair, R. 1881 A, 61.
Abel, O. 1919 A, 163.
Jordan, D. S. 1923 A, 109.
Stensiö, E. A. 1921 A, 147.
Traquair, R. H. 1890 G, 494 (Tarrasius).
1891 A, 127.
Woodward, A. S. 1891 A, 317.
1898 A, 81 (Tarassius).
Zittel, K. A. 1890 A, 129.
Zittel and Schlosser 1923 A, 84 (Syn. of Cœlacanthidæ).

PALÆOPHICHTHYS Eastman. Type *P. parvulus* Eastman.

Eastman, C. R. 1908 A, 252.
1917 A, 272.
Jordan, D. S. 1923 A, 109.
Zittel and Schlosser 1923 A, 88.

Palæophichthys parvulus Eastman.

Eastman, C. R. 1908 A, 253, fig. 37.
1917 A, 272, pl. x, fig. 2.
Pennsylvanian (Mazon Creek); Illinois.

Subclass ACTINOPTERI Cope.

The literature of the Teleostomi is here included. The group Actinopteri is usually made to contain the Crossopterygia.

Cope, E. D. 1871 T, 449, 451.
Hay, O. P. 1902 A, 356 (Teleostomi); 364 Actinopteri).
Abel, O. 1912 A, 153 (Teleostomi).
1919 A, 183 (Actinopterygii).
1920 A, 336, 341 (Actinopterygii).
1921 A, 212 ("teleostomen").
1922 F, 73 ("teleostomen").
1926 C, 43 ("teleostomen").
Allis, E. P. 1913 A, 324 (Teleostomi).
1915 A (Teleostomi).
1918 B, 257 (Teleostomi).
1922 C, 2 (Teleostomi).
Arldt, T. 1923 A, 491 ("teleostomen").
Boas, J. E. V. 1914 B, 543 ("knochenfische").
Bonaparte, C. L. 1838 B, 131 (Teleostomi).
1848 A, 48 (Teleostomi).
Boulenger, G. A. 1901 D, 1 (Teleostomi).
Bridge, T. W. 1904 A, 475 (Teleostomi).
Cope, E. D. 1885 BB, 64 (Teleostomi).
1891 N, 10, 19, 21 (Teleostomi, in part; Actinopterygii).
Cunningham, J. T. 1897 A, 497 ("actinopterygians").
1912 A, 246 (Teleostomi).
Dean, B. 1896 D, 336 ("teleostomes").
1900 A, 22 (Teleostomi).
1916 A ("fishes").
Dean, Gudger, Henn 1923 A, 401 (Actinopterygii); 703 (Teleostomi).
Dietz, P. A. 1917 A, 87 ("teleostomen").
1921 A, 433 (Acanthopterygii).
Dollo, L. 1896 A, 85 ("téléostomiens").
Dollo, L. 1906 B, 137 ("actinoptérygiens").
Eastman, C. R. 1901 C, 329 (Actinopterygii).
1907 B, 23, 164, 170, 225, 234 (Teleostomi, Actinopterygii).
1908 A, 69, 255 (Actinopterygii); 66, 69 ("teleostomes").
1911 A, 20 (Teleostomi).
1912 A, 228 (Actinopterygii).
Fowler, H. W. 1911 A, 144.
Fürbringer, M. 1902 A, 195 ("teleostomen").
Gill, T. 1905 A, 658 (Teleostomi).
Goetsch, W. 1920 A, 10, 518 ("teleostomen").
Goodrich, E. S. 1904 A, 494 (Actinopterygii).
1908 A, 765 (Teleostomi).
1908 B, 546 (Actinopterygii).
1909 A, 302 (Actinopterygii).
1924 A, 935.
Gregory, W. K. 1907 D, 448, 457, 460 (Actinopteri); 447 (Teleostomi).
1915 D, 321, 345 (Actinopterygii).
1920 A, 220 (Actinopterygii).
1923 A, 238 (Actinopterygii).
Hase, A. 1907 A, 658 ("actinopterygier").
Hennig, E. 1912 A, 483 ("ganoiden," "teleostier").
Hertwig, O. 1892 A (Teleostomi).
Hubbs, C. L. 1919 A, 570 (Actinopterygii, Teleostomi).
1919 B (Actinopterygii).
Hubrecht, A. A. W. 1908 A, 150 (Teleostomi).
Huene, F. 1926 A, 260 ("teleostomen").
Hussakof, L. 1906 A, 124 (Teleostomi).
Jaekel, O. 1902 E, 1115 ("teleostomen").
1907 A, 186 (Teleostomata, Hypostomata).
1911 A, 66 (Teleostomata).
1919 A, 110 ("teleostomen").

Jaekel, O. 1928 A, 43 ("teleostomen").
Jordan, D. S. 1905 A, i, 598, 599; ii, 555, 595 (Teleostomi).
1907 B, 225, 246, 424, 760 (Teleostomi).
1923 A, 111.
Kerr, J. G. 1908 B, 174 (Teleostomi).
Kiaer, J. 1924 A, 104, 121 ("teleostomes").
Klein, E. F. 1879 A, 80 (Acanthopterygii).
1885 A, 118, 132, 199, 222 (Actinopterygii).
1886 A, 207, 236, 274 (Acanthopterygii).
Lönnberg, E. 1902 A (Teleostomi).
Meek, A. 1916 A, 35, 48 (Teleostomi).
Moodie, R. L. 1915 I, 139 ("actinopterygians").
1926 A, 84 (Actinopterygii).
Parker and Haswell 1897 A, 183 (Teleostomi).
Patten, W. 1912 A, 386 (Teleostomii).
Pompeckj, J. F. 1913 A, 1135 (Teleostomi); 1138 (Actinopterygii).
Priem, F. 1906 B, 264, figs. 1, 2 ("téléostomes").
1908 B, 5 ("actinoptérygiens," "téléostomes").
Regan, C. T. 1904 A, 329 (Teleostomi).
1906 A, 724 (Teleostomi).
1909 B, 75 (Teleostomi).
Schlosser, M. 1917 A, 147 (Teleostomi).
Schmalhausen, J. J. 1912 A, 558 (Teleostomi).
1913 A, 4 (Teleostomi).
1913 C (Teleostomi).
1923 A, 537, 542 (Teleostomi).
Sewertzoff, A. N. 1923 B (Actinopterygii, Teleostomi).
1926 A, 451, 535 ("teleostomes," "actinopterygians").
Sewertzoff, A. N. 1926 D, 90.
Shann, E. W. 1919 A, 532 (Teleostomi).
Starks, E. C. 1926 A, 91.
Steinmann, G. 1927 A, 74, 76 ("actinopterygier").
Stensiö, E. A. 1921 A, 137, 148 (Actinopterygii).
1925 A, *passim* (Actinopterygii); 40 ("teleostomes").
1925 B, 179, 188 (Teleostomi).
Stöhr, P. 1882 A, 71 ("teliostier").
Stromer, E. 1905 C, 184 (Teleostomi).
1912 A, 25, 48 (Teleostomi).
1925 B, 364 (Teleostomi).
Sushkin, P. P. 1910 A, 250 (Actinopterygii, Teleostomi).
1927 A, 264, 266 (Teleostomi).
Swinnerton, H. W. 1905 A, 374 (Teleostomi).
Traquair, R. H. 1900 C, 507 (Actinopterygii, Teleostomi).
Versluys, J. 1925 B, 182 ("teleostomen").
Watson, D. M. S. 1926 A, 201, 242 (Actinopterygii).
Whitehouse, R. H. 1910 B, 590 (Teleostomi).
Woodward, A. S. 1898 B, 69 (Teleostomi).
1901 A, v ("actinopterygian fishes").
1915 B, lxxii (Actinopterygii).
1922 C, 81, 84 (Teleostomi, Actinopterygii).
Woodward, H. 1904 B, 141 (Actinopterygii, Teleostomi).
Wright, W. 1909 A, 671 (Teleostomi).
Zittel and Koken 1911 A, 84 (Teleostomi); 89 (Actinopterygii).
Zittel and Schlosser 1923 A, 84 (Teleostomi); 89 ("Actinopterygii").

Superorder GANOIDEI Müller.

Müller, J. 1845 A, 137.
Agassiz, L. 1833 A, 470 ("ganoiden").
1835 B, 331 ("ganoides").
1835 I, 99 ("ganoidians").
1844 D, 139 ("ganoides").
1844 E, 332 ("ganoids").
1858 A, 9 ("ganoids").
Allis, E. P. 1922 C, 3.
1923 B, 132.
Arldt, T. 1907 D, 645.
Ayers, H. 1906 A, 77.
Bardeleben, K. 1896 A, 113 ("ganoiden").
Barrell, J. 1915 B, 418 ("ganoids").
Boas, J. E. V. 1914 B, 542 ("ganoiden").
Brandt, J. F. 1865 A, 15 ("ganoiden").
Braus, H. 1901 B, 201 ("ganoiden").
1906 A ("ganoiden").
Bronn, H. G. 1862 B, 380 ("ganoiden").
Carus and Engelmann 1861 A, 1740.
Cockerell, T. D. A. 1911 F, 367 ("ganoids").
Collinge, W. E. 1890 A, 499.
1895 D, 77 ("ganoids").
Cunningham, J. T. 1897 A, 492 ("ganoids").
Dana, J. D. 1863 B, 317 ("ganoids").
1863 C, 343 ("ganoids").
1863 D, 130, 131 ("ganoids").
Dean, B. 1896 D, 336 ("ganoids").
Dean, Gudger, Henn 1923 A, 621, 681.
Dollo, L. 1889 E, 152 ("ganoides").
1892 D, 120 ("ganoides").
1896 A ("ganoides").
Dohrn, A. 1884 A, 186 ("ganoiden").
Dormitzer, M. 1852 A, 61 ("ganoiden").
Drüner, L. 1902 A, 438 ("ganoiden").
Eastman, C. R. 1898 E, 181 ("ganoids").
Ebner, V. 1896 A, 146 ("ganoiden").
Egerton, P. G. 1854 A, 367.
Eggeling, H. 1906 A, 105 ("ganoiden").
Fitzinger, L. J. 1873 A, 49, 52.
Frassetto, F. 1915 A ("ganoidi").
Fürbringer, K. 1903 A, 377 ("ganoiden").
Gadow, H. 1896 A, 15 ("ganoids").
Ganin, M. 1880 A, 143.
1905 D, 830, 836, 899 ("ganoiden").
Gaupp, E. 1906 B ("ganoiden").
Gegenbaur, C. 1867 A, 56 ("ganoiden").
1867 B, 386 ("ganoiden").
1870 C, 442 ("ganoiden").
1879 A, 525 ("ganoiden").
Goette, A. 1901 A, 533, 552 ("ganoiden").
Gregory, W. K. 1904 A, 62.
1917 D, 625 ("ganoids").
Haeckel, E. 1893 A, xvi ("ganoiden").
Haller, G. 1924 A, 305 ("ganoiden").
Hase, A. 1907 A, 656 ("ganoiden").
Hasse, C. 1872 A, 419 ("ganoiden").
Hasse and Schwarck 1870 A, 30 ("ganoiden").
Hatschek, B. 1889 B, 113 ("ganoiden").
Heckel, J. 1850 A, 358 ("ganoiden").
1850 B, 143 ("ganoiden").
1851 A, 219 ("ganoiden").
Hoernes, R. 1886 A, 546.

Höfer, B. 1890 A, 103 ("ganoiden").
Howes, G. B. 1894 A, 87.
Hubbs, C. L. 1926 A, 73 ("ganoids").
Hubrecht, A. A. W. 1908 A, 153 ("ganoids").
Huxley, T. H. 1858 D, 515 ("ganoids").
1859 H, 33.
1863 F, 427.
1869 G, 452.
1876 E, 121.
1880 E, 471.
1881 A, 454 ("ganoids").
1883 B, 567 ("ganoids").
Jacobshagen, E. 1920 A, 88 ("ganoiden").
Jaekel, O. 1902 A, 107 ("ganoiden").
1926 B, 43 ("ganoiden").
1926 D, 71 ("ganoiden").
1927 A, 251 ("ganoiden").
Jordan, D. S. 1898 A, 176 ("ganoids").
1905 A, ii, 2, 571.
1907 B, 225, 247, 760.
1923 A, 111.
Kiaer, J. 1924 A, 111 ("ganoids").
Kingsley, J. S. 1925 A, 11, 32, 98, 236.
Klaatsch, H. 1890 A, 124, 182 ("ganoiden").
Kner, R. 1860 B, 818.
Laaser, P. 1903 A, 572 ("ganoiden").
Lakjer, T. 1927 A, 278.
Lavocat, A. 1885 A, 32 ("ganoids").
Ledouble, A. F. 1903 A, 645 ("ganoids").
Lütkin, C. 1868 C.
1871 A, 283 ("ganoids").
Martins, C. 1872 A, 307 ("ganoides").
Miller, H. 1851 A, 91 ("ganoids").
Osborn, H. F. 1916 E, 601 ("ganoids").
Parker, W. K. 1887 B, 54 ("ganoids").
Pehrson, T. 1922 A.
Philippi and Frech 1903 A, 11 ("ganoiden").
Puccioni, N. 1908 A, 56 ("ganoidei").
Reynolds, S. H. 1897 A, 542.
Röse, C. 1897 A, 60 ("ganoiden").
Sabatier, A. 1904 A, 249 ("ganoides").
Sagemehl, M. 1883 A ("ganoiden").
Salbey, R. 1868 A, 734 ("ganoiden").
Schauinsland, H. 1906 A, 427 ("ganoiden").
Schlosser, M. 1898 D, 120 ("ganoiden").
1917 A, 133, 137, 142, 146 ("ganoiden").
Schöne, G. 1902 A, 1 ("ganoiden").
Scupin, H. 1896 A, 145 ("ganoiden").
Sewertzoff, A. N. 1896 A, 273 ("ganoiden").
1897 A, 410 ("ganoiden").
1923 B.
1926 A.
Solger, B. 1880 B, 367 ("ganoiden").
Stannius, H. 1854 A (Ganoidei).
Steinmann, G. 1908 A, 205 ("ganoiden").
1927 A, 9.
Stephan, P. 1900 A, 294, 316 ("ganoides").
Stolley, E. 1920 A, 76 ("ganoiden").
Stromer, E. 1912 A, 28, 48.
1925 B, 348, 350.
Traquair, R. H. 1870 A, 177 ("ganoids").
Uhlmann, E. 1921 A ("ganoiden").
Veit, O. 1907 A, 174 ("ganoiden").
Wagner, R. 1843 A ("ganoiden").
Whitehouse, R. H. 1910 C, 135 ("ganoids").
Wiedersheim, R. 1892 A, 45 ("ganoiden").
Woodward, A. S. 1922 C, 96.
Wright, W. 1909 A, 671 ("ganoids").
Ziegler, H. E. 1901 A, 231 ("ganoiden").
Zittel and Koken 1911 A, 90.
Zittel and Schlosser 1923 A, 90.

Order CHONDROSTEI Müller.

Müller, J. 1845 A, 119, 137.
Hay, O. P. 1902 A, 365.
Allis, E. P. 1905 A, 478, 495.
1909 A, 202.
1915 A, 613.
1918 B, 263.
1919 A, 374.
Arldt, T. 1907 D, 645.
1923 A, 492 ("chondrostier").
Beer, G. R. 1926 A, 277.
Belling, D. E. 1912 A, 52.
Bonaparte, C. L. 1833 B, 1202 (Eleutheropomi).
Bridge, T. W. 1878 A, 727 (Selachoidei).
1904 A, 485.
Bronn, H. G. 1849 A, 830, seq.
Carus, V. 1875 A, 594.
Cope, E. D. 1871 T, 451.
1891 N, 20.
Cunningham, J. T. 1912 A, 240, 246, 261, 383.
Davidoff, M. 1879 A, 485.
Dean, Gudger, Henn 1923 A, 674.
Duméril, A. 1870 A, 18, 19 ("chondrostés").
Eastman, C. R. 1907 B, 23, 170.
1908 A, 63, 69, 255.
1911 A, 18, 20, 45.
1914 A, 140.
1917 A, 244.
Emery, C. 1895 A, 224 ("chondroganoides").
Fürbringer, M. 1902 A, 163 ("chondrosteiden").
Gadow, H. 1902 B, 359.
Gaupp, E. 1898 B, 841, 863 ("knorpelganoiden").
1905 D, 902 ("knorpelganoiden").
1913 A, 83 ("knorpelganoiden").
Gegenbaur, C. 1866 A, 123.
Gill, T. 1905 A, 658.
1909 B, 838 (Chondroganoidei).
Goetsch, W. 1920 A, 514.
Goodrich, E. S. 1904 A, 495.
1906 A, 351.
1909 A, 307 (Chondrostei); 315 (Acipenseroidei).
1912 A, 80.
Greene, J. R. 1861 A, 227.
Gregory, W. K. 1907 D, 448, 462 (Acipenseroidei); 462 (Chondrostei); 448, 462 (Heterocerci).
1920 A, 221.
Hasse, C. 1893 C, 76 ("knorpelganoiden").
Heckel, J. 1851 A, 219.
Hilzheimer, M. 1913 A, 471.
Hoernes, R. 1886 A, 546, 549.
Hubbs, C. L. 1919 A, 570.
Huxley, T. H. 1861 D, 441, 448.
Jaekel, O. 1906 D, 180.
1911 A, 49 (Chondrostei); 80 (Heterocerci).
1919 A, 75, 104.
1921 A, 222, 234 (Chondrostea).
1926 A, 174.
1927 B, 337.

Jordan, D. S. 1905 A, ii (Lysopteri); 17, 563 (Chondrostei).
1907 B, 253, 760.
1923 A, 111 (Chondrostei); 113 (Glaniostomi, Selachostomi).
Jordan and Gilbert 1882 A, 82.
Kehrer, F. A. 1896 A, 351 ("knorpelganoiden").
Kiaer, J. 1924 A, 108.
Kingsley, J. S. 1885 A, 92.
1925 A, 98.
Klaatch, H. 1893 B, 665 ("knorpelganoiden").
1893 C, 148 ("knorpelganoiden").
Lakjer, T. 1927 A, 280 ("chondrostier").
Leunis and Ludwig 1883 A, 776.
Lönnberg, E. 1901 A.
1902 A (Sturiones).
Luther, A. 1913 A.
1913 B, 5, 15, 47, 55.
Lütkin, C. 1868 C.
Meek, A. 1916 A, 48.
Miall, L. C. 1872 A, 34.
Moodie, R. L. 1915 I, 145.
Parker, W. K. 1881 C, 71 ("chondrostean ganoids").
Parker and Haswell 1897 A, 203.
Pompeckj, J. F. 1913 A, 1130 (Chondrostei); 1141 (Chondrosteoidei).
1926 A, 71.
Rabl, C. 1901 A, 481 ("chondrosteiden").
Rauther, M. 1913 A, 1099.
Regan, C. T. 1904 A, 330, 332.
1906 A, 729.
1909 B, 75.
1923 B, 458.
Reynolds, S. H. 1897 A, 67, 105, 117, 123, 537.
Romer, A. S. 1924 A, 121, 127, 128.
Rosén, N. 1916 A, 22-30.
Ryder, J. 1885 C, 96.
1886 A, 74, 77.
Schlesinger, G. 1909 A, (147).
Schmalhausen, J. J. 1912 A, 524.
1913 A, 2.
Schmalhausen, J. J. 1913 C.
1916 C, 209.
1917 A, 108.
Sewertzoff, A. N. 1896 A, 273 ("knorpelganoiden").
1918 A, 207.
1923 B.
1926 A, 451 (Chondrostei); 523 (Chondrosteoidei); 451, 523 (Palæoniscoidei).
1926 B, 547 (Chondrostei, Chondrosteoidei)
1926 C, 42 ("knorpelganoiden").
1926 D, 76, 83.
1926 E, 556.
1926 F, 274 ("knorpelganoiden").
Sewertzoff and Disler 1924 A, 345 ("knorpelganoiden").
Shann, E. W. 1919 A, 556.
Stensiö, E. A. 1921 A, 271.
1925 A, 119, 216.
1927 A, 32.
Stromer, E. 1912 A, 30 (Chondrostei); 31 (Heterocerci).
1925 B, 356 (Chondrostei, Heterocerci).
Suschkin, P. P. 1910 A, 250.
Terra, P. 1911 A, 204.
Traquair, R. H. 1880 A, 158.
1900 C, 508 (Acipenseroidei).
1911 A, 7 (Acipenseroidei).
Wallace, A. R. 1876 A, ii, 459.
Watson, D. M. S. 1925 A, 815, 849.
Whitehouse, R. H. 1910 B, 593, 594.
Woodward, A. S. 1906 A, 315.
1906 C, 276.
1922 C, 85.
Woodward, H. 1878 A, 18, 22.
Zittel and Koken 1911 A, 94 (Chondrostei); 97 (Heterocerci).
Zittel and Schlosser 1923 A, 94, 97 (Chondrostei, Heterocerci).
Zittel and Woodward 1902 A, 73.
Zograf, N. 1887 A, 70.
1896 B, 320.

Suborder PALÆONISCIFORMES, new name.

Cope, E. D. 1880 P, 440 (Lysopteri).
Goodrich, E. S. 1909 A, 309 (Palæoniscoidei).
Jordan, D. S. 1905 A, ii, 13, 580 (Lysopteri).
1907 B, 249 (Lysopteri).
Sewertzoff, A. N. 1923 B, 105-145 (Palæoniscoidei).
1926 A, 451, 523.
Zittel and Woodward 1902 A, 75 (Heterocerci).

PALÆONISCIDÆ Owen.

Owen, R. 1860 E, 136.
Hay, O. P. 1902 A, 365.
Abel, O. 1919 A, 186, fig. 170.
1920 A, 343 ("palæoniscіden").
1921 A, 212 ("palæonisciden").
Allis, E. P. 1905 A, 490.
1919 A, 375.
1919 B, 75.
1922 A, 149.
1923 A, 57.
Arldt, T. 1907 D, 670.
1923 A, 493 ("palæoniscіden").
Bridge, T. W. 1878 A, 371.
1904 A, 486.
Bronn, H. G. 1849 A, 830, seq. (Sauroidei).
Carus V. 1875 A, 591 (Palæoniscini).
Cope, E. D. 1891 N, 20.
Cunningham, J. T. 1897 A, 498.
Deecke, W. 1913 A, 72 ("palæoniscіden").
Eastman, C. R. 1905 A, 57.
1907 B, 23, 171.
1908 A, 256.
1913 A, 119 ("palæoniscid").
1917 A, 273.
Fitzinger, L. J. 1873 A, 52 (Palæonisci).
Gill, E. L. 1923 B, 467.
Gill, T. 1881 A, 371.
Goodrich, E. S. 1904 A, 495, 499.
1908 A, 768.
1909 A, 309 (Palæoniscidæ, Palæoniscoidei).
1913 A, 80.
Gregory, W. K. 1907 D, 448.

Gregory, W. K. 1915 D, 322.
Hennig, E. 1915 A, 577 (Palæonisci).
Hubbs, C. L. 1919 B, 62, 63.
Jaekel, O. 1911 A, 80 ("palæonisciden").
1926 D, 70.
Jordan, D. S. 1905 A, ii, 14, 584.
1907 B, 250, 760.
1923 A, 111.
Kiaer, J. 1924 A, 95, 97, 99, 108, 109, 125, fig. 42 (Palæoniscoidei).
Lambe, L. M. 1909 B, 176.
1910 B, 9.
1912 A, 5.
Moodie, R. L. 1915 I, 145.
Pompeckj, J. F. 1913 A, 1140.
Regan, C. T. 1904 A, 334.
1923 B, 455, 460.
Rice and Gregory 1906 A, 172 ("palæoniscids").
Ridewood, W. G. 1904 A, 69 ("palæoniscid fishes").
Rosén, N. 1916 A, 18, 30, fig. 9 ("Palæoniscoidei).
Schlosser, M. 1917 A, 133, 135, 138, 147 ("palæonisciden").
Scupin, H. 1896 A, 156, 181.
Sewertzoff, A. N. 1923 B.
1926 E, 555.
Steinmann, G. 1907 A, 410.
Stensiö, E. A. 1921 A, 148, 238.
1922 A, 1263 ("palæoniscids").
1925 A, *passim*.
1925 B, 162, 187.
Stolley, E. 1920 A, 79 ("palæonisciden").
Stromer, E. 1905 H, 216.
1925 B, 360. ("palæonisciden").
Traquair, R. H. 1879 C, 128.
1880 A, 157.
1900 C, 507.
1901 A, 61.
1909 A.
1911 A, 7.
1911 B.
1912 A.
1914 A.
Trouessart, E. L. 1906 A, 212.
Watson, D. M. S. 1913 D, 26 ("palæoniscids").
1923 A, 472.
1925 A, 815-870, figs. 9-20.
Woodward, A. S. 1906 A, 313.
1906 C, 276.
1911 C, 46 ("palæoniscids").
1924 A, 113.
Zittel and Koken 1911 A, 98.
Zittel and Schlosser 1923 A, 98.
Zittel and Woodward 1902 A, 75.

GONATODUS Traquair. Type *Amblypterus punctatus* Agassiz.

Hay, O. P. 1902 A, 365.
Goodrich, E. S. 1908 A, 768.
Kiaer, J. 1924 A, 87.
Stensiö, E. A. 1925 A, 86.
Traquair, R. H. 1877 D, 265.
1907 A, 92, fig. 2.
Watson, D. M. S. 1925 A, 859, fig. 27.

Gonatodus brainerdi (Thomas).

Hay, O. P. 1902 A, 365.
Hussakof, L. 1908 A, 74.
Newberry, J. S. 1874 G, 90, 98 (Palæoniscus).
1874 H, 212 (Palæoniscus).
Traquair, R. H. 1907 A, 93.
Mississippian (Berea grit); Ohio.

AMBLYPTERUS Agassiz. Type *A. latus* Agassiz.

Hay, O. P. 1902 A, 365.
Abel, O. 1919 A, 188, fig. 143.
1920 A, 337, fig. 534.
Agassiz, L. 1833 A, 371.
1835 B, 345.
1835 H, 205.
1844 C, 268.
Atthey, T. 1868 C, 361.
Barkas, W. J. 1874 D, 549.
Brongniart, C. 1888 C, 57.
Bronn, H. G. 1837 A, 126.
1848 A, 28.
1849 A, 657.
Coulon, L. 1903 A, 139.
Deecke, W. 1913 A, 72.
Egerton, P. G. 1849 B, 1.
Giebel, C. G. 1855 A, 113, pl. xlvi, fig. 8.
Goodrich, E. S. 1904 A, 496.
1909 A, 212.
Heckel, J. J. 1850 A, 363.
Heilprin, A. 1887 A, 302.
Jordan and Evermann 1917 A, 144.
Kiaer, J. 1924 A, 106.
Klaatsch, H. 1890 A, 144.
Mantell, G. A. 1844 A, 633.
Newberry, J. S. 1857 D, 364.
Owen, R. 1845 B, 69.
1866 A, 196.
Scupin, H. 1896 A, 158.
Stensiö, E. A. 1925 A, 86, 209.
Watson, D. M. S. 1925 A, 825, 826, fig. 4.
Woodward and White 1926 A, 570.
Zittel and Koken 1911 A, 98.
Zittel and Schlosser 1923 A, 99.
Zittel and Woodward 1902 A, 75.

Amblypterus carolinæ Hay.

Hay, O. P. 1902 A, 365.
Triassic (Chatham): North Carolina.

HAPLOLEPIS E. A. Miller. Type *Eurylepsis corrugata* (Newb.).

Hay, O. P. 1902 A, 366.
Arldt, T. 1923 A, 494 (Eurylepis).
Barkas, W. J. 1874 D, 550 (Eurylepis).
Davis, J. W. 1880 C, 60 (Eurylepis).
Newberry, J. S. 1857 D, 364 (Mekolepis).
Traquair, R. H. 1914 B, 182 (Eurylepis).
Zittel and Koken 1911 A, 98 (Eurylepis).
Zittel and Schlosser 1923 A, 99, fig. 162 (Eurylepis).
Zittel and Woodward 1902 A, 75 (Eurylepis).

Haplolepis corrugata (Newb.).

Hay, O. P. 1902 A, 366.
Hussakof, L. 1908 A, 74.
Pennsylvanian; Ohio.

Haplolepis granulata (Newb.).

Hay, O. P. 1902 A, 366.
Hussakof and Bryant 1919 A, 191.
Pennsylvanian; Ohio.

Haplolepis minima (Newb.).

Hay, O. P. 1902 A, 366.
Pennsylvanian; Ohio.

Haplolepis ornatissima (Newb.).

Hay, O. P. 1902 A, 366.
Hussakof, L. 1908 A, 75.
Pennsylvanian; Ohio.

Haplolepis ovoidea (Newb.).

Hay, O. P. 1902 A, 366.
Pennsylvanian; Ohio.

Haplolepis serrata (Newb.).

Hay, O. P. 1902 A, 366.
Pennsylvanian; Ohio.

Haplolepis striolata (Newb.).

Hay, O. P. 1902 A, 366.
Pennsylvanian; Ohio.

Haplolepis tuberculata (Newb.).

Hay, O. P. 1902 A, 366.
Hussakof and Bryant 1919 A, 191.
Zittel and Woodward 1902 A, 76, fig. 135 (Eurylepis).
Pennsylvanian; Ohio.

Haplolepis sp. indet.

Eastman, C. R. 1902 B, 97 (Eurylepis).
1902 G, 541 (Eurylepis). Pennsylvanian (Mazon Creek); Illinois.
1903 B, 194 (Eurylepis). Pennsylvanian (Mazon Creek); Illinois.
1908 A, 260 (Eurylepis). Mississippian (Waverly): Kentucky.

CHEIROLEPIS Agassiz. Type *C. traillii* Agassiz.

Hay, O. P. 1902 A, 366.
Abel, O. 1907 D, (162).
1919 A, 187, fig. 141.
Agassiz, A. 1877 A, 124.
Agassiz, L. 1835 B, 345.
1844 C, 269.
Arldt, T. 1923 A, 493.
Barkas, W. J. 1874 D, 549.
Bridge, T. W. 1904 A, 487.
Bronn, H. G. 1848 A, 285.
1849 A, 656.
Coulon, L. 1903 A, 137.
Eastman, C. R. 1907 B, 171.
1908 A, 255.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1904 A, 497.
1908 A, 768, fig. 202.
1909 A, 311, fig. 288.
Gregory, W. K. 1915 D, 322.
Heilprin, A. 1887 A, 149 (Chirolepis).
Huxley, T. H. 1861 D, 458.
Lütken, C. 1871 A, 287.
Osborn, H. F. 1916 E, 605, fig. 14.
1917 B, 170, fig.
Pompeckj, J. F. 1913 A, 1140, fig. 46.
Regan, C. T. 1904 A, 339.

Schlosser, M. 1917 A, 147.
Sewertzoff, A. N. 1923 B, 119.
Traquair, R. H. 1880 A, 150, 155.
1900 C, 507.
Watson, D. M. S. 1923 A, 472.
1925 A, 816, 820, 823, 864, figs. 1-3.
Watson and Day 1916 A, 28.
Woodward, A. S. 1906 C, 276.
Zittel and Koken 1911 A, 98.
Zittel and Schlosser 1923 A, 98.
Zittel and Woodward 1902 A, 75.

Cheirolepis canadensis Whiteaves.

Hay, O. P. 1902 A, 366.
Clarke, J. M. 1913 A, 115.
Claypole, E. W. 1883 C, 278.
Eastman, C. R. 1907 B, 17, 171.
1908 A, 256.
1917 A, 273.
Hussakof and Bryant 1919 A, 181, pl. lvii, figs. 1, 2.
Lambe, L. M. 1904 C, 17, 34, 43.
1912 A, 5.
Whiteaves, J. F. 1907 B, 255.
Upper Devonian (Scaumenac); Quebec.

RHADINICHTHYS Traquair. Type *Palæoniscus ornatissimus* Agassiz.

Hay, O. P. 1902 A, 367.
Arldt, T. 1923 A, 494.
Brongniart, C. 1888 C, 61.
Day, H. 1915 A, 422, figs. 1-3.
Eastman, C. R. 1908 A, 257.
1916 A, 655.
1917 A, 273.
Jaekel, O. 1927 B, 388.
Moodie, R. L. 1915 I, 137, 142, 147.
Stensiö, E. A. 1921 A, 148.
1925 A, 86, 209.
Tornquist, A. 1904 A, 347.
Traquair, R. H. 1877 D, 431.

Traquair, R. H. 1890 G, 493.
1911 B, 126.
Watson, D. M. S. 1925 A, 832.
Woodward, A. S. 1924 A, 113, fig. 5.
Woodward and White 1926 A, 570.

Rhadinichthys alberti (Jackson).

Jackson, C. T. 1851 B, 22, pl. i, fig. 1; pl. ii, figs. 2-6, 8 (Palæoniscus).
Hay, O. P. 1902 A, 367 (R. alberti, R. cairnsii).
Brongniart, C. 1888 C, 49 (Palæoniscus alberti, P. cairnsii).

Dawson, J. W. 1868 A, 131, fig. 62 (Palæoniscus).
Eastman, C. R. 1908 A, 261 (R. alberti, R. cairnsii).
Hussakof and Bryant 1919 A, 188, text-fig. 63.
Jackson, C. T. 1851 C, 281 ("Palæoniscus").
Kiaer, J. 1924 A, 99, fig. 44.
Lambe, L. M. 1904 C, 18, 34, 43 (R. alberti, R. cairnsii).
1909 A, 167, figs. 1, 2 (R. cairnsii a syn.).
1910 B, 18, pl. iii, figs. 1-6 (R. cairnsii a syn.).
Tornquist, A. 1904 A, 350 (R. cairnsi).
Traquair, R. H. 1877 A, 559 (R. alberti, R. cairnsii).
Woodward and White 1926 A, 570, 571.
Young, G. A. 1913 A, 356.
Mississippian (Albert); New Brunswick.

Rhadinichthys antiquus (Williams).

Hay, O. P. 1902 A, 368 (Palæoniscum).
Eastman, C. R. 1907 B, 18, 171 (Palæoniscus. This genus?).
1908 A, 282.
1917 A, 273 (To Rhadinichthys).
Hussakof and Bryant 1919 A, 19, 182, 183, pl. lxiii, fig. 3, pl. lxiv; text-figs. 60, 62.
Upper Devonion (Portage); New York.

Rhadinichthys deani Eastman.

Eastman, C. R. 1908 A, 264, pl. xiii, text-figs. 40, 41.
Eastman, C. R. 1913 A, 119.
1916 B, 104.
1917 A, 273.
Dean, B. 1912 A, 228.
Moodie, R. L. 1910 A, 367.
1911 G, 278.
1915 I, 139, 142, 147, fig. 4.
1920 F, 330, figs. 1, 2.
Parker, G. H. 1908 A, 272 ("fish").
Wiman, C. 1918 B, 88.
Mississippian (Waverly); Kentucky.

Rhadinichthys devonicus (Clarke).

Hay, O. P. 1902 A, 368 (Palæoniscum).
Clarke and Ruedemann 1903 A, 768 (Palæoniscus).
Clarke and Luther 1904 A, 62 (Palæoniscus).
Eastman, C. R. 1907 B, 17, 171 (Palæoniscus?).
1908 A, 258, 282.
Hussakof and Bryant 1919 A, 19, 182, pls. lix-lxiii; pl. lxv, figs. 1, 3; text-figs. 60, 61.
Merrill, G. P. 1907 A, 13 (Palæoniscus).
Traquair, R. H. 1911 B, 127.
Upper Devonian (Genesee and Portage), New York: (New Albany); Kentucky.

Rhadinichthys elegantulus (Eastman).

Eastman, C. E. 1908 A, 274 (Elonichthys).
Hussakof and Bryant 1919 A, 189, pl. lxvi, text-fig. 63.
Lambe, L. M. 1909 A, 167 (Elonichthys).
1910 B, 30 (Elonichthys).
Young, G. A. 1913 A, 356 (Elonichthys).
Mississippian (Albert); New Brunswick.

Rhadinichthys gracilis (Newb. and Worth.).

Hay, O. P. 1902 A, 367.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
1917 A, 274, pl. ix, fig. 4.
Pennsylvanian (Mazon Creek); Illinois.

Rhadinichthys leidyianus (Lea).

Hay, O. P. 1902 A, 367.
Merrill, G. P. 1907 A, 14 (Palæoniscus).
Pennsylvanian; Pennsylvania.

Rhadinichthys? lineatus (Newb.).

Hay, O. P. 1902 A, 367.
Hussakof, L. 1908 A, 95 (This genus?).
Pennsylvanian; Ohio.

Rhadinichthys reticulatus (Williams).

Hay, O. P. 1902 A, 368 (Palæoniscum).
Eastman, C. R. 1907 B, 18, 171 (To Rhadinichthys).
1908 A, 282.
1917 A, 273.
Hussakof and Bryant 1919 A, 182.
Upper Devonian (Portage); New York.

Rhadinichthys sp. indet.

Branson, E. B. 1911 B, 30, pl. i, figs. 1-6. Devonian (Ohio shales); Ohio.
Eastman, C. R. 1907 B, 172, pl. iv, fig. 11; pl. ix, fig. 4. Devonian (Chemung); Pennsylvania.
1908 A, 260. Devonian (Chemung); Pennsylvania.
Hussakof and Bryant 1919 A, 188. Upper Devonian (Portage); New York.
Kindle, E. M. 1914 C, 288. Devonian (Huron): Ontario.

Canobius Traquair. Type *C. ramsayi* Traquair.

Traquair, R. H. 1881 A, 46.
Brongniart, C. 1888 C, 62.
Lambe, L. M. 1909 A, 167, 172.
Scupin, H. 1896 A, 158.
Traquair, R. H. 1890 G, 493.
1912 A, 171.
1914 A, 181.
Woodward, A. S. 1891 A, 430.

Canobius modulus (Dawson).

Hay, O. P. 1902 A, 367 (Rhadinichthys).
Eastman, C. R. 1908 A, 262, fig. 39 (Rhadinichthys).
Lambe, L. M. 1904 C, 18, 35, 43 (Rhadinichthys).
1909 A, 167, 172, figs. 7, 8.
1910 B, 31, pl. xi, figs. 1-7.
Traquair, R. H. 1912 A, 171.
Mississippian (Albert); New Brunswick. Nova Scotia.

Pygopterus Agassiz. Type *P. humboldti* Agassiz.

Hay, O. P. 1902 A, 367.
Agassiz, L. 1833 A, 475.
1835 H, 217.
1844 C, 267.
Atthey, T. 1868 C, 362.
Barkas, W. J. 1874 D, 552.
Bronn, H. G. 1848 B, 1066.
1849 A, 662.
Deecke, W. 1926 A, 186.
Stensiö, E. A. 1921 A, 149, 203.
1925 A, 86, 209.
Wilser, J. L. 1923 A, 68, fig.
Zittel and Koken 1911 A, 98.
Zittel and Schlosser 1923 A, 98.

Pygopterus humboldti Agassiz.

Hay, O. P. 1902 A, 367.
Permian; Europe: Triassic (Newark): Pennsylvania.

Palæoniscum Blainv. Type *P. freieslebenense* Blainv.

Unless otherwise indicated the authors, as cited, use the form *Palæoniscus*.
Hay, O. P. 1902 A, 367 (Palæoniscum).
Abel, O. 1912 F, 476.
1919 A, 187, fig. 142.
Agassiz, L. 1833 A, 372.
1835 B, 345.
1835 D, 189.
1835 H, 206.
1844 C, 268.
Atthey, T. 1868 C, 357, pl. xvi.
Barkas, W. J. 1874 D, 55 (Palæoniscum).
Bridge, T. W. 1904 A, 486.
Brongiart, C. 1888 C, 57.
Bronn, H. G. 1848 B, 893 (Palæoniscum, Palæoniscus).
1849 A, 657.
Coulon, L. 1903 A, 137.
Cunningham, J. T. 1897 A, 497.
Cuvier, G. 1825 A, v, 2, 307 (Palæoniscum).
Deecke, W. 1913 A, 72.
1926 A, 186.
Dollo, L. 1904 C, 139, 235.
Dormitzer, M. 1852 A, 61.
Eastman, C. R. 1907 B, 171.
1915 B, 440.
1916 A, 655.
1916 B, 104.
1917 A, 273.
Egerton, P. G. 1852 C, 6 C, 1, pl. ii.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1904 A, 496.
1908 A, 757.
1909 A, 310, fig. 286.
Gregory, W. K. 1901 A, 143 (Palæoniscum).
Heckel, J. J. 1850 A, 363, 365.
Heilprin, A. 1887 A, 302.
Hennig, E. 1915 A, 577.
1915 C, 52.
Jackson, C. T. 1854 A, 239.
Jaekel, O. 1911 A, 86, figs. 61, 63.
Jordan, D. S. 1905 A, ii, 14, 584 (Palæoniscum).
1907 B, 250 (Palæoniscum).
1917 A, 108 (Palæoniscum).
Klaatsch, H. 1890 A, 144.
Lönnberg, E. 1901 A.
Lütken, C. 1868 C.
1871 A, 287.
Mantell, G. A. 1844 A, 633.
Miall, L. C. 1872 A, 25.
Müller, J. 1845 A.
1846 C, 118.
Murchison, R. I. 1854 A, 317, fig. 58.
Newberry, J. S. 1857 D, 364.
Pompeckj, J. F. 1913 A, 1141, fig. 47.
Price, P. H. 1927 A, 215, 225, pls. xv, xix.
Redfield, W. C. 1842 A, 23.
Regan, C. T. 1923 B, 461.
Reynolds, S. H. 1897 A, 67.
Rogers, H. D. 1844 A, 249, 251.
Ryder, J. 1885 E, 95.
Scupin, H. 1896 A, 156, pl. ix, figs. 2, 3.
Sewertzoff, A. N. 1926 E, 555.
Steinmann, G. 1907 A, 410.
Stensiö, E. A. 1921 A, 149.
1925 A, 210.
Tornquist, A. 1904 A, 348.
Traquair, R. H. 1901 A, 61.
Watson, D. M. S. 1925 A, 822, 826.
Woodward, A. S. 1898 B, 83, fig. 61.
1906 C, 276, fig. 9.
1922 C, 85, fig. 91.
Zittel and Koken 1911 A, 98.
Zittel and Schlosser 1923 A, 98, fig. 159.
Zittel and Woodward 1902 A, 76.

Palæoniscum scutigerum Newb.

Hay, O. P. 1902 A, 368.
Pennsylvanian; Ohio.

Palæoniscum sp. indet.

Bell, W. A. 1913 A, 340, 343 (Palæoniscus). Pennsylvanian (Joggins); Nova Scotia.
Hobbs, W. H. 1901 A, 55 ("Palæoniscus"). Triassic (Newark); Connecticut.
Phillips, W. B. 1912 A, 18 (Palæoniscus. This genus?). Permian (Wichita); Texas
Stauffer and Schroyer 1920 A, 146, pl. xiii, figs. 38, 39 (Palæoniscus). Permian (Elm Grove); Ohio.
Tilton, J. L. 1926 B, 394 (This genus?). Permian; West Virginia.

Tegeolepis S. A. Miller. Type *Actinophorus clarkii* Newb.

Hay, O. P. 1902 A, 368.
Jordan, D. S. 1920 C, 458.

Tegeolepis clarkii (Newb.).

Hay, O. P. 1902 A, 368.
Claypole, E. W. 1903 A, 319 (Actinophorus).
Eastman, C. R. 1907 B, 19 (Actinophorus).
1908 A, 285 (Actinophorus).
Hussakof, L. 1908 A, 102.
Devonian (Cleveland); Ohio.

ELONICHTHYS Giebel. Type *E. germari* Giebel.

Hay, O. P. 1902 A, 368.
Arldt, T. 1923 A, 494.
Barkas, W. J. 1874 D, 550.
Brongniart, C. 1888 C, 60.
Deecke, W. 1913 A, 72.
Eastman, C. R. 1903 B, 190.
1917 A, 274.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1908 A, 768.
Raymond, P. E. 1925 B, 553.
Stensiö, E. A. 1921 A, 149.
Traquair, R. H. 1877 D, 275.
1879 B, 119.
1901 A.
1907 A.
Watson, D. M. S. 1925 A, 832, 851, figs. 21-25, 28, 29.
Woodward, A. S. 1922 C, 85, fig. 90.
Zittel and Koken 1911 A, 98.
Zittel and Schlosser 1923 A, 98.
Zittel and Woodward 1902 A, 77.

Elonichthys brownii (Jackson).

Hay, O. P. 1902 A, 368 (E. browni).
Eastman, C. R. 1908 A, 266.
Hussakof and Bryant 1919 A, 191.
Lambe, L. M. 1904 C, 18, 35, 43.
1909 A, 167, 169, figs. 3, 4 (Palæoniscus jacksoni Dawson a syn.).
1910 B, 22, pls. iv-ix (E. browni).
Young, G. A. 1913 A, 356.
Mississippian (Albert); New Brunswick.

Elonichthys cupidineus Lambe.

Lambe, L. M. 1916 B, 39, pl. ii.
Raymond, P. E. 1925 B, 553.
Triassic? (Upper Banff); Alberta.

Elonichthys disjunctus Eastman.

Eastman, C. R. 1903 B, 191, 194, pl. iii, fig. 31.
Pennsylvanian (Mazon Creek); Illinois.

Elonichthys elegans (Emmons).

Hay, O. P. 1902 A, 368.
Lyman, B. S. 1894 A, 212 (Radiolepis).
Wherry, E. T. 1912 A, 377 (Radiolepis. This species?).

Elonichthys ellsi Lambe.

Lambe, L. M. 1909 A, 171, figs. 5, 6.
Lambe, L. M. 1910 B, 29, pl. x, figs. 1-6.
Young, G. A. 1913 A, 356.
Mississippian (Albert); New Brunswick.

Elonichthys hypsilepis Hay.

Hay, O. P. 1902 A, 368.
Andreae, A. 1903 B, 442.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 188, 194.
1917 A, 274, pl. ix, fig. 3; pl. x, fig. 3.
Merrill, G. P. 1907 A, 11.
Pennsylvanian (Mazon Creek); Illinois.

Elonichthys peltigerus Newb.

Hay, O. P. 1902 A, 368 (E. peltigerus, E. macropterus).
Andreae, A. 1903 B, 442.
Eastman, C. R. 1902 B, 97 (Amblypterus macropterus a syn.).
1902 G, 541.
1903 B, 194.
1917 A, 274.
Newberry, J. S. 1878 D, 810 (Palæoniscus).
Price, P. H. 1927 A, 226, text-fig. 5 (Palæoniscus).
Pennsylvanian; Illinois, Ohio.

Elonichthys perpennatus Eastman.

Eastman, C. R. 1902 G, 539, 541, fig. 4.
1902 B, 97.
1903 B, 190, 194, pl. v, fig. 49.
1917 A, 275, pl. ix, fig. 1.
Pennsylvanian (Mazon Creek); Illinois.

Elonichthys sp. indet.

Woodward, A. S. 1900 E, 203. Carboniferous (Horton); Nova Scotia.

SPHÆROLEPIS Fritsch. Type *S. kounoviensis* Fritsch.

Fritsch, A. 1877, Sitzungsb. böhm. Ges. Wiss., 46.
Jordan, D. S. 1919 B, 389 (Sphœrolepis).
Hussakof, L. 1911 A, 170.
Woodward, A. S. 1891 A, 523.

Sphærolepis arctata (Cope).

Hay, O. P. 1902 A, 364 (Peplorhina).
Case, E. C. 1915 A, 96.
Cope and Matthew 1915 A, pl. iii, fig. 5 (Peplorhina; Sphærolepis).
Hay, O. P. 1900 A, 707 (Peplorhina).
Hussakof, L. 1911 A, 171, pl. xxxi, figs. 1, 2; text-fig. 54.
Pennsylvanian (Upper); Illinois: Permian (Wichita?, Clear Fork?); Texas.

ACROLEPIS Agassiz. Type *A. sedgwicki* Agassiz.

Hay, O. P. 1902 A, 369.
Agassiz, L. 1833 A, 476.
1835 H, 218.
1844 C, 267.
Barkas, W. J. 1874 D, 548.
Bronn, H. G. 1848 A, 9.
1849 A, 662.
Raymond, P. E. 1925 B, 553.
Stensiö, E. A. 1921 A, 149.
1925 A, 86, 209.
Traquair, R. H. 1890 G, 492.
1909 A.
Woodward, A. S. 1924 A.
Zittel and Koken 1911 A, 98.

Zittel and Schlosser 1923 A, 99.
Zittel and Woodward 1902 A, 77.

Acrolepis? hortonensis Dawson.

Hay, O. P. 1902 A, 369.
Lambe, L. M. 1904 C, 18, 35, 43.
Mississipian; New Brunswick.

Acrolepis hussakofi, new species.

Hussakof, L. 1916 A, 348, figs. 1, 2 ("palæoniscid fish").

O'Harra, C. C. 1916 A, 347 ("fishes").
Permian (Minnekahta); South Dakota.

Acrolepis lætus Lambe.

Lambe, L. M. 1916 B, 42, pl. iii.
Raymond, P. E. 1925 B, 553.
Stensiö, E. A. 1921 A, 149.
Triassic? (Upper Banff); Alberta.

PYRITOCEPHALUS Fritsch. Type *Palœoniscus sculptus* Fritsch.

Fritsch, A. 1895 A, 86.
Hussakof, L. 1911 A, 173.

Pyritocephalus sp. indet.

Case, E. C. 1915 A, 96.
Hussakof, L. 1911 A, 173, text-fig. 55.
Permian (Wichita?, Clear Fork?); Texas.

PLATYSOMATIDÆ.

Unless otherwise indicated the authors, as cited, use the name Platysomidæ.

Hay, O. P. 1902 A, 369.
Abel, O. 1912 F, 488 ("platysomiden").
1919 A, 190, figs. 147, 148.
1922 F, 77.
Allis, E. P. 1905 A, 490.
1919 A, 377.
Arldt, T. 1907 D, 674.
Bridge, T. W. 1878 A, 722.
1904 A, 487.
Bronn, H. G. 1849 A, 830, seq. ("lepidoiden").
Carus, V. 1875 A, 592.
Cope, E. D. 1891 N, 20.
Cunningham, J. T. 1897 A, 498.
Dean, Gudger, Henn 1923 A, 622.
Eastman, C. R. 1898 E, 183 ("platysomiden").
1907 B, 23 (Platysomatidæ).
1908 A, 255.
1917 A, 276 (Platysomatidæ).
Fitzinger, L. J. 1873 A, 52 (Platysomi).
Gill, T. 1881 A, 371.
Goodrich, E. S. 1908 A, 768.
1909 A, 312.
Gregory, W. K. 1907 D, 448.
Hoernes, R. 1886 A, 554.
Jordan, D. S. 1905 A, ii, 14, 586.
1907 B, 250, 760.
1923 A, 112.
Kiaer, J. 1924 A, 97.
Lütken, C. 1871 A, 289 ("platysomiens").
Pompeckj, J. F. 1913 A, 1141.
Schlosser, M. 1917 A, 134, 147 ("platysomiden").
Scupin, H. 1896 A, 159, 182.
Sewertzoff, A. N. 1923 B.
1926 A, 451 (Platysomatidæ).
Steinmann, G. 1907 A, 410.
1927 A, 48 ("platysomiden").
Stensiö, E. A. 1921 A, 250, 271.
1925 A, 119, 209.
Woodward, A. S. 1888 M, 142.
1898 A, 87.
1906 C, 276.
1911 C, 46 ("platysomids").
1921 C, 181.
1924 A, 114.
Zittel and Koken 1911 A, 100.
Zittel and Schlosser 1923 A, 100.
Zittel and Woodward 1902 A, 78.

CHIRODUS M'Coy. Type *C. pes-ranæ* M'Coy.

Hay, O. P. 1902 A, 369.
Abel, O. 1908 E, 415 (Cheirodus).
1912 F, 448, fig. 339 (Cheirodus).
Barkas, W. J. 1874 D, 545 (Cheirodus).
Böklen, H. 1887 A, 78 (Cheirodus).
Bridge, T. W. 1904 A, 488, fig. 286 (Cheirodus).
Eastman, C. R. 1917 A, 276 (Cheirodus).
Etheridge, R. 1906 A, 130 (Cheirodus).
Jordan, D. S. 1919 B, 239 (Cheirodus).
1923 A, 112 (Cheirodus).
Stensiö, E. A. 1925 A, 211, 212 (Cheirodus).
Woodward, A. S. 1924 A, 114, fig. 6 (Cheirodus).
Zittel and Koken 1911 A, 101, fig. 175.
Zittel and Schlosser 1923 A, 100, fig. 165 (Cheirodus).

Chirodus acutus Newberry.

Hay, O. P. 1902 A, 369.
Pennsylvanian; Ohio.

Chirodus orbicularis (Newb. and Worth.).

Hay, O. P. 1902 A, 369 (Platysomus).
Eastman, C. R. 1902 B, 97 (Platysomus).
1902 G, 541 (Platysomus).
1903 B, 193, 194 (Cheirodus).
1917 A, 276, pl. ix, fig. 2 (Cheirodus).
Pennsylvanian (Mazon Creek); Illinois.

PLATYSOMUS Agassiz. Type *P. gibbosus* (Agassiz).

Hay, O. P. 1902 A, 369.
Agassiz, A. 1877 A, 124.
Agassiz, L. 1835 B, 345.
Agassiz, L. 1835 H, 208.
1844 C, 267.
Allis, E. P. 1919 A, 377.

Barkas, W. J. 1874 D, 552.
Bridge, T. W. 1904 A, 488.
Bronn, H. G. 1848 B, 994.
1849 A, 658.
Deecke, W. 1913 A, 80.
Eastman, C. R. 1917 A, 276.
Hussakof, L. 1911 A, 173.
Jordan, D. S. 1919 B, 181 (Type Stromateus gibbosus Blv.).
Lambe, L. M. 1914 E, 17.
Murchison, R. I. 1854 A, 312, fig. 57.
Raymond, P. E. 1925 B, 553.
Scupin, H. 1896 A, 159, pl. ix, fig. 5.
Sewertzoff, A. N. 1926 E, 565.
Steinmann, G. 1927 A, 58, 68, text-fig. 16.
Stensiö, E. A. 1921 A, 251.
Traquair, R. H. 1900 C, 507.
Wagner, J. A. 1860 A, 81.
Woodward, A. S. 1898 B, 87, fig. 64.
1906 C, 277, fig. 10.
1924 A, 114.
Woodward, H. 1904 B, 141.
Zittel and Koken 1911 A, 101.
Zittel and Schlosser 1923 A, 101, fig. 165.
Zittel and Woodward 1902 A, 79.

Platysomus albertensis Lambe.

Lambe, L. M. 1916 A, 195 (No description).
Permian; Alberta.

Platysomus canadensis Lambe.

Lambe, L. M. 1914 E, 17, pl. i; text-fig.
1915 B, 121.
1916 B, 36.
Raymond, P. E. 1925 B, 553.
Stensiö, E. A. 1921 A, 251, 264.
Triassic? (Upper Banff); Alberta.

Platysomus circularis Newb. and Worth.

Hay, O. P. 1902 A, 369.
Eastman, C. R. 1902 G, 541.
1902 D, 97.
1903 B, 190, 194.
1917 A, 276.
Hussakof, L. 1908 A, 87.
Pennsylvanian (Mazon Creek); Illinois.

Platysomus lacovianus Cope.

Hay, O. P. 1902 A, 369.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
1903 B, 194.
1917 A, 276.
Hussakof, L. 1908 A, 87.
Merrill, G. P. 1907 A, 16.
Pennsylvanian (Mazon Creek); Illinois.

Platysomus palmaris Cope.

Hay, O. P. 1902 A, 369.
Beede, J. W. 1907 A, 120.
Case, E. C. 1915 A, 96.
Eastman, C. R. 1917 A, 276.
Hussakof, L. 1908 A, 88.
1911 A, 173, pl. xxx, fig. 7; text-fig. 56.
Pennsylvanian (Upper); Oklahoma, Illinois?; Permian (Wichita, Clear Fork); Texas (Enid); Oklahoma.

Platysomus sp. indet.

Phillips, W. B. 1912 A, 18, fig. 4 (This genus?).
Permian (Wichita); Texas.
Wegeman, C. H. 1915 A, 25. Permian (Wichita); Oklahoma.

TURSEODUS Leidy. Type *T. acutus* Leidy.

Hay, O. P. 1902 A, 369.
Stensiö, E. A. 1921 A, 149.

Turseodus acutus Leidy.

Hay, O. P. 1902 A, 369.
Hawkins, A. C. 1914 A, 153.
Lyman, B. S. 1894 A, 212.
Triassic (Newark); Pennsylvania.

DICTYOPYGIDÆ Hay.

Unless otherwise indicated the authors, as quoted, use the family name Catopteridæ.
Hay, O. P. 1902 A, 370 (Dictyopygidæ).
Bridge, T. W. 1904 A, 488.
Dean, Gudger, Henn 1923 A, 623.
Deecke, W. 1926 A, 195 ("catopteriden").
Eastman, C. R. 1905 B, 95.
1911 A, 18, 28, 46.
1914 A, 139.
1917 A, 279.
Goodrich, E. S. 1909 A, 313.
Gregory, W. K. 1907 D, 448.
Jordan, D. S. 1905 A, ii, 14, 16 (Dictyopygidæ).
1907 B, 252, 760 (Dictyopygidæ).
Jordan, D. S. 1923 A, 112.
Pompeckj, J. F. 1913 A, 1140.
Regan, C. T. 1904 A, 332.
Schlosser, M. 1917 A, 135 ("catopteriden").
Sewertzoff, A. N. 1923 B.
1926 A, 451.
Stensiö, E. A. 1921 A, 253, 271.
1925 A, 119, 210, 224.
Swinnerton, H. H. 1925 A, 87.
Traquair, R. H. 1900 C, 507.
Watson, D. M. S. 1925 A, 866 ("catopterids").
Zittel and Koken 1911 A, 102.
Zittel and Schlosser 1923 A, 101.
Zittel and Woodward 1902 A, 79.

REDFIELDUS Hay. Type *Catoperus gracilis* Redfield.

Unless otherwise indicated the authors, as quoted, employ the name *Catopterus*.
Hay, O. P. 1902 A, 370 (Redfieldius).
Abel, O. 1919 A, 189.
Arldt, T. 1923 A, 493.
Bronn, H. G. 1849 A, 658.
Deecke, W. 1913 A, 74.
1926 A, 194.

Eastman, C. R. 1905 B, 68, 95.
1911 A, 47, fig. 7.
1914 A, 144.
1917 A, 279.
Eaton, G. F. 1903 A, 267.
Emerson, B. K. 1898 A, 400.
Heilprin, A. 1887 A, 302.
Jordan, D. S. 1905 A, ii, 16 (Redfieldius).
1907 B, 252 (Redfieldius).
1920 C, 486 (Redfieldius).
Rice and Gregory 1906 A, 172.
Rogers, H. D. 1844 A, 251.
Stensiö, E. A. 1921 A, 253, 267.
Swinnerton, H. H. 1925 A, 96.
Traquair, R. H. 1900 C, 507.
Woodward, A. S. 1898 B, 87.
Zittel and Koken 1911 A, 102.
Zittel and Schlosser 1923 A, 102.
Zittel and Woodward 1902 A, 79.

Redfieldius anguilliformis (W. C. Redfield).

Hay, O. P. 1902 A, 370.
Lyman, B. S. 1894 A, 209 (Catopterus).
Triassic (Newark); Connecticut, New Jersey

Redfieldius gracilis (J. H. Redfield).

Hay, O. P. 1902 A, 370.
Bayley, Kümmel, and Salisbury 1914 A, 13 (Catopterus).
Cross, W. 1899 A, 3 (Catopterus. This species?).
1899 B, 3 (Catopterus. This species?).
Eastman, C. R. 1905 B, 96, pl. xiii (Catopterus).
1911 A, 28, 48, pls. ix-xi (Catopterus).
1914 A, 142, pls. xxx, xxxi (Catopterus).
1917 A, 280, pl. xii, figs. 1, 2; pl. xiii, figs. 1, 2 (Catopterus).
Hawkins, A. C. 1914 A, 153 (Catopteris).
Hobbs, W. H. 1901 A, 55 (Catopterus).
Huene, F. 1922 H, 150 (Catopterus).
1926 E, 2 (Catopterus. This species?).
Hussakof, L. 1908 A, 63 (Catopterus).
Hussakof and Bryant 1919 A, 192 (Catopterus).
Lull, R. S. 1917 D, 109 (Catopterus).
Lyman, B. S. 1894 A, 207 208, 209, 212, 214 (Catopterus).
Moodie, R. L. 1918 B, 390 (Catopterus).
1923 B, 329 (Catopterus).
Smith, J. H. 1900 A, 498 (Catopterus).
Triassic (Newark); Connecticut, New Jersey: (Dolores); Colorado?

Redfieldius minor (Newb.).

Hay, O. P. 1902 A, 370.
Lyman, B. S. 1894 A, 209 (Catopterus).
Triassic (Newark); Connecticut.

Redfieldius ornatus (Newb.).

Hay, O. P. 1902 A, 370.
Lyman, B. S. 1894 A, 209 (Catopterus).
Triassic (Newark); Connecticut.

Redfieldius parvulus (W. C. Redfield).

Hay, O. P. 1902 A, 370.
Lyman, B. S. 1894 A, 214 (Catopterus).
Triassic (Newark); Connecticut.

Redfieldius redfieldi (Egerton).

Hay, O. P. 1902 A, 370.
Bayley, Kümmel and Salisbury 1914 A, 13 (Catopterus).
Eastman, C. R. 1905 B, 98 (Catopterus).
1911 A, 28, 51, figs. 5, 6 (Catopterus).
1914 A, 142 (Catopterus).
Hussakof, L. 1908 A, 64 (Catopterus).
Hussakof and Bryant 1919 A, 192 (Catopterus).
Lull, R. S. 1917 D, 109 (Catopterus).
Lyman, B. S. 1894 A, 209 (Catopterus).
Philippi and Frech 1903 A, 12, pl. vii (Catopterus).
Rice and Gregory 1906 A, pl. xvii (Catopterus).
Triassic (Newark); Connecticut, New Jersey.

Redfieldius sp. indet.

Newberry, J. S. 1888 A, 61 (Catopterus). Triassic (Newark); New Jersey.
Hussakof, L. 1908 A, 65 (Catopterus). Triassic (Newark); New Jersey.

Dictyopyge Egerton. Type *D. macrura* (Redfield).

Hay, O. P. 1902 A, 370.
Arldt, T. 1923 A, 493.
Barkas, W. J. 1874 D, 550.
Deecke, W. 1913 A, 74.
1926 A, 186.
Eastman, C. R. 1905 B, 99.
1911 A, 55.
1917 A, 278.
Hussakof and Bryant 1919 A, 192.
Stensiö, E. A. 1921 A, 267.
Swinnerton, H. H. 1925 A, 94.
Traquair, R. H. 1900 C, 507.
Zittel and Koken 1911 A, 102.
Zittel and Schlosser 1923 A, 103.

Dictyopyge macrura (W. C. Redfield).

Hay, O. P. 1902 A, 370.
Eastman, C. R. 1905 B, 99.
1911 A, 28, 55.
Goodrich, E. S. 1909 A, 314, fig. 292.
Hussakof and Bryant 1919 A, 192, pls. xxiv, lxvii.
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 208.
Redfield, J. H. 1888 A, 64 (Catopterus).
Rogers, W. B. 1843 A, 315 (Catopterus).
1884 A, 315 (Catopterus).
Shaler and Woodworth 1899 A, 431.
Triassic (Newark); Virginia.

Suborder Acipenseriformes, new name.

Goodrich, E. S. 1909 A, 315 (Acipenseroidei).

DIPHYODONTIDÆ Jordan.

Jordan, D. S. 1923 A, 113.

DIPHYODUS Lambe. Type *D. longirostris* Lambe.

Lambe, L. M. 1902 A, 30.
Cockerell, T. D. A. 1919 A, 172.
Hay, O. P. 1910 B, 296.
The systematic position of this genus is extremely doubtful.

Diphyodus longirostris Lambe.

Lambe, L. M. 1902 A, 30, pl. xv, figs. 18, 19.
Bowen, C. F. 1915 A, 118, 148-150.
Brown, B. 1914 E, 378.
Cockerell, T. D. A. 1908 C, 162.
1919 A, 172.
Hatcher, J. B. 1905 B, 69.
Lambe, L. M. 1904 C, 22, 36, 45 (Diphiodus).
1907 B, 179.
Matthew, W. D. 1916 A, 485.
Osborn, H. F. 1902 I, 11, 16.
Peale, A. C. 1912 A, 754.
Stensiö, E. A. 1925 A, 9.
Upper Cretaceous (Belly River); Alberta: (Judith River); Montana: (Lance); Wyoming.

Diphyodus sp. indet.

Bowen, C. F. 1915 A, 118.
Brown, B. 1907 A, 842.
Cretaceous (Hell Creek); Montana

BELONORHYNCHIDÆ Woodward.

Woodward, A. S. 1888 K, 356.
Abel, O. 1919 A, 194.
Jordan, D. S. 1923 A, 113.
Nicholson and Lydekker 1889 A, 988.
Raymond, P. E. 1925 B, 551.
Steinmann, G. 1927 A, 75.
Woodward, A. S. 1895 A, 12.
1898 B, 88.
Zittel and Koken 1911 A, 97, fig. 166.
Zittel and Schlosser 1923 A, 95.

BELONORHYNCHUS Bronn. Type *B. striolatus* Bronn.

Bronn, H. G. 1858, Neues Jahrb. Min., etc., 12.
Abel, O. 1919 A, 195, fig. 151.
Nicholson and Lydekker 1889 A, 988.
Woodward, A. S. 1888 K, 354.
1895 A, 9.
1898 B, 88, fig. 65.
Zittel, K. A. 1890 A, 265, fig. 270.
Zittel and Koken 1911 A, 97, fig. 166.
Zittel, Eastman, etc. 1902 A, 74, fig. 133.

Belonorhynchus dayi Raymond.

Raymond, P. E. 1925 B, 551, fig. 1.
Triassic (Upper Banff); Alberta.

ACIPENSEROIDÆ, new form.

Gregory, W. K. 1907 D, 448, 462 (Acipenseroidei).
Sewertzoff, A. N. 1926 A, 523, 528 (Chondrosteoidei).
Traquair, R. H. 1877 B, 8 (Acipenseroidei).

ACIPENSERIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 98.
Hay, O. P. 1902 A, 371.
Abel, O. 1912 F, 518.
1919 A, 197.
Agassiz, L. 1835 B, 331 (Sturiones).
Arldt, T. 1907 D, 635.
1912 A, 716, 762.
1923 A, 492 ("acipenseriden").
Beer, G. R. 1925 A, 671 ("sturgeons").
Berg, L. S. 1904 A, 664 ("acipenseriden").
Bonaparte, C. L. 1833 B, 1202.
1838 B, 131.
Braus, H. 1901 B, 201, 236 ("acipenseriden").
Bridge, T. W. 1896 A, 534.
1904 A, 489, 492, 729.
Carter, J. T. 1905 A, 129.
Carus, V. 1875 A, 595 (Acipenserini).
Cockerell, T. D. A. 1919 A, 171.
Collinge, W. E. 1894 A, 528.
1895 D, 82.
Cope, E. D. 1891 N, 21.
Cunningham, J. T. 1912 A, 246.
Cuvier, G. 1805 A ("esturgeons").
Davidoff, M. 1879 A, 489 ("acipenserinen").
Dean, Gudger, Henn 1923 A, 398, 623.
Dombrowsky, B. A. 1918 A, 203, 204.
Dormitzer, M. 1852 A, 63 ("störe").
Duméril, A. 1870 A, 86, pls. xv-xix.
Eastman, C. R. 1908 A, 256 (Acipensiderida).
Ebner, V. 1896 A, 138 ("acipenseriden").
Filatoff, D. 1907 A, 309.
Fitzinger, L. J. 1873 A, 52 (Acipenseres).
Fürbringer, M. 1902 A, 186 ("acipenseriden").
Gegenbaur, C. 1879 A, 521 ("störe").
Gill, T. 1875 B, 252.
Goetsch, W. 1920 A, 514 ("acipenseriden").
Goodrich, E. S. 1909 A, 318.
Gregory, W. K. 1907 D, 448.
Haeckel, E. 1868 A, 445 (Accipenserides).
Hase, A. 1907 A, 658 ("sturionen").
Heckel, J. 1850 A, 366 ("sturionen").
1851 A, 219 (Acipenserini).
Hennig, E. 1906 A, 173.
Hoernes, R. 1886 A, 549.
Jaekel, O. 1906 C, 157 ("störe").
1906 D, 180 (Acipenseroidei).
1919 A, 104 ("acipenseriden").
1926 D, 70 ("störe").
Jordan, D. S. 1905 A, ii, 18, 555.
1907 B, 254, 761.
1923 A, 113.
Jordan and Gilbert 1882 A, 84.
Kiaer, J. 1924 A, 97, 108 (Acipenseroidei).
Kindred, J. E. 1919 A, 36.
Kingsley, J. S. 1885 A, 92.
Köstlin, O. 1844 A ("störe").
Kurz, —— 1925 A, 37 ("acipenseriden").
Leunis and Ludwig 1883 A, 771.

Luther, A. 1913 A, 6 ("acipenseriden").
Lütken, C. 1871 A, 293 ("esturgeons").
Meek, A. 1916 A, 48.
Meissner, W. 1907 A, 465.
1907 B, 5.
Meunier, S. 1903 A, 774 ("esturgeons").
Owen, R. 1845 B, 68 (Sturionidæ).
1848 B, 86 ("sturgeons").
1866 A, 12, 41, 246, 478 (Sturionidæ).
Parker, W. K. 1881 C, 71.
1888 C, 399 ("sturgeons").
1890 A, 62.
Pompeckj, J. F. 1913 A, 1139 (Accipenseridæ).
1926 A, 71.
Rabl, C. 1901 A, 475, 479 ("störe").
Rauther, M. 1913 A, 1099.
Richardson, J. 1836 A, 278 (Sturionideæ).
Sagemehl, M. 1883 A ("acipenseriden").
Sewertzoff, A. N. 1923 A, 400 ("accipenseriden").
1923 B.
1924 A, 578 ("sturgeons").
Sewertzoff, A. N. 1925 A, 274 ("acipenseriden").
1926 A, 514, 523.
1926 B, 548.
1926 C, 42 ("acipenseriden").
1926 E, 556.
Stannius, H. 1854 A (Acipenserini).
Steinmann, G. 1927 A, 80 ("accipenseriden").
Stensiö, E. A. 1925 A, 14, 176, 216, 224.
1925 B, 162.
Stephan, P. 1900 A, 291, 319 ("acipenseridés").
Stromer, E. 1925 B, 357, 364.
Trouessart, E. L. 1906 A, 212.
Wallace, A. R. 1876 A, II, 459 (Accipenseridæ).
Watson, D. M. S. 1925 A, 815, 824, 863, 864.
Whitehouse, R. H. 1910 B, 593.
Woodward, A. S. 1911 C, 46 ("sturgeons").
1924 A, 113.
Zittel and Koken 1911 A, 95 (Accipenseroidei).
Zittel and Schlosser 1923 A, 95.
Zittel and Woodward 1902 A, 74.
Zograf, N. 1887 A, 70.

Acipenser Linn. Type *A. sturio* Linn.

Hay, O. P. 1902 A, 371.
Abel, O. 1912 F, 658.
1919 A, 23, figs. 2, 14.
Adams, L. A. 1919 A, 68, pl. i.
Ahlborn, F. 1896 B, 1 ("stör").
Alessandrini, A. 1849 A, 377, pl. xxiv, fig. 4.
Allis, E. P. 1897 A, 19.
1898 B, 93.
1903 A, 662.
1905 A, 478.
1909 A, 213.
1915 A.
1922 C, 13.
1925 A, 77.
1926 A, 166.
Bardeleben, K. 1901 A, 66 ("störe").
1903 A, 22 ("störe").
Baudelot, E. 1873 A, 94 (Accipenser).
Beer, G. R. 1924 C, 337.
1925 A, 671, figs. 1-20.
1926 A, 277, figs. 14-19, 110, 118, 119.
Berg, L. S. 1904 A, 666.
Bliss, R. 1875 A. 386 ("sturgeon").
Brandt, J. F. 1865 A, 7.
Braus, H. 1901 B, 201, pls. xxv, xxvi, xxvii, xxix.
1906 A, fig. 197.
1919 A, 2, fig. 13.
Bridge, T. W. 1878 A, 689, 717, text-fig.
1896 A, 534.
1904 A, 492, 729.
Bronn, H. G. 1848 A, 7.
1849 A, 653.
Collinge, W. E. 1894 A, 521.
1895 D, 80 (Accipenser).
Connell, A. 1835 A, 301.
Cunningham, J. T. 1897 A, 493 ("sturgeon").
Cuvier, G. 1815 A, 125 ("esturgeon").
Davidoff, M. 1879 A, 487, fig. 7.
Dean, B. 1895 C, 734.
1896 D, 338.
Dean, Gudger, Henn 1923 A, 667.
Dendy, A. 1907 A, 295.
Derjugin, K. M. 1909 A.
Derjugin, K. M. 1910 A, 629.
Dollo, L. 1889 E, 152 ("esturgeon").
1904 C, 235.
Dombrowsky, B. A. 1918 A, 201, 204, figs. 6-8.
Duméril, A. 1856 A, 156 ("esturgeon").
1870 A, 20, 84.
Edgeworth, F. H. 1925 A, 240.
1926 A, 178, figs. 4-12.
Eichwald, E. 1832 A, 886 ("stör").
Elliott, A. I. M. 1907 A, 648 (Accipenser).
Fitzinger and Heckel 1836 A, 261, pls. xxv-xxx.
Froriep, A. 1905 A, 156 ("esturgeon").
Gaupp, E. 1897 A, 537.
1898 B, 845, 850.
1905 D, 900.
1906 B.
1911 A, 419.
Gegenbaur, C. 1866 A, 125 ("störe").
1867 A, 60 ("störe").
1867 B, 420, pl. ix, fig. 20.
1879 A, 523.
Giebel, C. G. 1855 A, 113 (Accipenser).
Goetsch, W. 1920 A, 514.
Goette, A. 1901 A, 552.
Goodrich, E. S. 1901 A, 314, fig. C.
1904 A, 479, fig. 3.
1906 A, 347.
1909 A, 505, figs.
Gregory, W. K. 1904 A, 57.
1915 D, 347, fig. 4.
Hague, F. 1924 A, 274.
Haller, B. 1906 A, 255.
Hamburger, R. 1904 A, 75, 82.
Hase, A. 1913 A, 147, fig. 68.
Hasse, C. 1893 C, 76, pl. v.
Heckel, J. 1851 A, 219.
Heilprin, A. 1887 A, 68, 69 (Accipenser).
Hoeven, J. 1822 A.
Huxley, T. H. 1863 F, 425, figs. 35, 36.
1876 E, 118.
Imms, A. D. 1904 A, 33.
Jaekel, O. 1902 C, 610 (Accipenser).
1906 D, 181, figs. 4, 6.

Jaekel, O. 1913 A, 85 ("störe").
1921 A, 222, fig. 4.
1926 A, 161, 171.
1926 B, 43 ("störe").
1926 D, 70.
1928 A, 43 ("störe").
Jordan, D. S. 1905 A, ii, 18, 555.
1907 B, 254.
Jordan and Evermann 1917 A, 11.
Jordan and Gilbert 1882 A, 85.
Kesteven, H. L. 1922 A, 314.
1926 A, 139.
Kiaer, J. 1924 A, 97, 109, figs. 43, 48.
Kingsley, J. S. 1925 A, 28, 96, 99, 100, 230, figs. 28, 102, 106, 243.
Klaatsch, H. 1890 A, 146, 245.
1893 B, 657 ("störe").
1893 C, 181 (Accipenser).
Klein, E. E. 1868 A (Accipenser).
Köstlin, O. 1844 A ("stör").
Kupffer, C. 1893 A, 518.
Kurz, —— 1925 A, 36-68, figs. 1-9.
Lakjer, T. 1927 A, 279, fig. 103.
Lebedinsky, N. G. 1917 A, 315.
Leunis and Ludwig 1883 A, 772.
Luther, A. 1913 A, 15, figs. 4, 6, 7, 10.
1913 B, 6, figs. 1, 2, 6, 7, 23, 24.
McMurrich, J. P. 1883 A, 634.
Meckel, J. F. 1825 A ("störe").
Meeke, A. 1916 A, 49.
Meissner, W. 1907 A, 465.
1907 B, 1, pls. i, ii; text-figs.
Mivart, St. G. 1879 B, 540 ("sturgeon").
Molin, R. 1851 A, 357, pl. xv.
Mollier, S. 1897 A, pls. i-x.
Nauck, E. T. 1926 B, 73.
Norman, E. W. 1926 A, 455.
Owen, R. 1848 B, 101.
1866 A, 74, 196, figs. 62, 125.
Parker, W. K. 1873 B, 254 (Accipenser).
1881 C, 71.
Parker and Bettany 1877 A, 86 ("sturgeon").
Pehrson, T. 1922 A, 9.
Price, P. H. 1927 A, 279, text-fig. 2.
Priem, F. 1908 B, 132, pl. iii, fig. 1; pl. iv, figs. 1-4.
Pütter, A. 1923 A, 220.
Rabl, C. 1901 A, 481.
Rauther, M. 1913 A, 1068, figs. 19, 21.
Reynolds, S. H. 1897 A, 531, fig. 18.
Ridewood, W. G. 1896 A, 389, fig. 18.
1921 A, 329.
Ryder, J. 1885 E, 95.
Salensky, W. 1899 B, 298.
Schauinsland, H. 1906 A, 430.
Schlosser, M. 1917 A, 142.
Schmalhausen, J. J. 1912 A, 525, 558, pl. xv.
1913 A, 16.
1913 B, 742, 747.
1913 C, pls. i, v.
1917 A, 108.
1923 A, 538, fig. 4.
Sewertzoff, A. 1896 A, 219, 274, pls. iv, v.
1918 A, 206.
1923 B, figs. 1, 3, 4.
1926 A, 451-540, figs. 1-37.
1926 B, 547, figs. 1-23.
Sewertzoff, A. 1926 C, 42.
1926 E, 523, figs. 1-38.
Shann, E. W. 1919 A, 556.
Shepherd, C. E. 1910 B, 298.
Stadtmüller, F. 1926 A, 160, fig. 6.
Stannius, H. 1854 A.
Stanton and Hatcher 1905 A, 50.
Starks, E. C. 1916 A, 12.
Stensiö, E. A. 1921 A, 273.
1925 A, *passim*, text-fig. 15.
1925 B, 106.
Stephan, P. 1900 A, 339.
Stromer, E. 1925 B, 358.
Sushkin, P. P. 1927 A, 268, fig. 1.
Taylor, H. F. 1916 A, 298.
Traquair, R. H. 1912 A, 168.
Wagner, R. 1843 A.
Wallace, A. R. 1876 A, ii, 459 (Accipenser).
Watson, D. M. S. 1923 A, 471.
1925 A, 831, 848, 850, 864.
Weber, E. H. 1821 A, 1065.
Whitehouse, R. H. 1910 B, 593, pl. xlvii, fig. 2.
1918 A, 139.
Wiedersheim, R. 1880 C, 128.
Wiman, C. 1918 A, 93, fig. 7.
Woodward, A. S. 1890 G, 104, figs. 4, 8.
1922 C, 87, fig. 95.
Zittel and Koken 1911 A, 95 (Accipenser).
Zittel and Schlosser 1923 A, 95, figs. 18-21.
Zograf, N. 1887 A, 70.
1896 B, 320.

Acipenser albertensis Lambe.

Lambe, L. M. 1902 A, 29, pl. xxi, fig. 9.
Bowen, C. F. 1915 A, 118, 148, 149, 150.
Brown, B. 1914 E, 378.
Cockerell, T. D. A. 1908 C, 163.
1919 A, 172.
Hatcher, J. B. 1905 B, 69.
Lambe, L. M. 1904 C, 21, 36, 43.
1917 E, 293 (This species?).
Matthew, W. D. 1916 A, 485 (Accipenser).
Osborn, H. F. 1902 I, 11, 16.
Peale, A. C. 1912 A, 754 (Accipenser).
Stromer, E. 1925 B, 357.
Williston, S. W. 1902 K, 953.
Upper Cretaceous (Belly River); Alberta: (Judith R.); Montana: (Lance); Wyoming.

Acipenser medirostris Ayres.

Ayres, W. O. 1854, Proc. Calif. Acad. Sci., 1, 15.
Hay, O. P. 1927 D, 216.
Jordan, D. S. 1907 A, 128 (This species?).
Jordan and Evermann 1896 A, 104.
Miller, L. H. 1912 A, 71 (This species?).
Sinclair, W. J. 1904 A, 18 (This species?).
Recent; Pacific coast north of San Francisco: Pleistocene?; California?

Acipenser ornatus Leidy.

Hay, O. P. 1902 A, 371.
Miocene; Virginia.

Acipenser sturio Linn.

Linnæus, C. 1758 A, 237.
Hay, O. P. 1923 A, 311.

Jordan and Evermann 1896 A, 105.
Leidy, J. 1889 H, 19.
Recent; Atlantic coasts of Europe and America: Pleistocene? Pennsylvania?

Acipenser sp. indet.

Sternberg, C. M. 1926 A, 104. Upper Cretaceous (Edmonton); Alberta.

Suborder Polyodontiformes, new name.

Gill, T. 1872 C, 22 (Selachostomi).
1909 B, 838 (Selachostomi).

Jordan, D. S. 1905 A, ii, 20, 591 (Selachostomi).
1907 B, 256, 761 (Selachostomi).
1923 A, 113 (Selachostomi).

POLYODONTIDÆ Bonaparte.

Bonaparte, C. L. 1838 B, 131.
Hay, O. P. 1902 A, 371.
Abel, O. 1912 F, 476 (Polyodon).
1919 A, 196.
Adams, L. A. 1919 A, 66, pl. i (Polyodon).
Allis, E. P. 1903 A, 659 (Polyodon).
1915 A, (Polyodon).
1918 B, 25, 260 (Polyodon).
1919 A, 370 (Polyodon).
Arldt, T. 1907 D, 682 (Spatularidæ).
1912 A, 648, 650, 658, 662, 670, 678, 690, 716, 762.
1923 A, 492 ("polyodontiden").
Bonaparte, C. L. 1840 A, 47.
Bridge, T. W. 1878 A, 683, pls. lv-lvii (Polyodon).
1896 A, 536.
1897 B, 722, fig. 1 (Polyodon).
1904 A, 489, 491, 751.
Collinge, W. E. 1894 A, 528.
1895 C (Selachoidei).
1895 D, 82.
Cope, E. D. 1891 N, 21.
Cunningham, J. T. 1912 A, 246.
Davidoff, M. 1879 A (Polyodon).
Dean, Gudger, Henn 1923 A, 623.
Duméril, A. H. A. 1870 A, 271 ("polyodontidés").
Eastman, C. R. 1908 A, 256.
Egerton, P. G. 1858 B, 233 (Chondrosteus).
Forbes, W. A. 1879 A, 364 (Polyodon).
Fürbringer, M. 1902 A, 186 ("polyodontiden").
Gaupp, E. 1905 D, 900 (Polyodon).
Gegenbaur, C. 1879 A, 522 (Polyodon).
Gill, T. 1901 A, 307 (Polyodon).
1905 A, 659.
Goodrich, E. S. 1909 A, 317.
Günther, A. C. 1881 A, 687.
Huxley, T. H. 1863 F, 425, fig. 34 (Spatularia).
1876 E, 116 (Polyodon).
Imms, A. D. 1904 A, 22 (Polyodon).
Jordan, D. S. 1905 A, ii, 20, 587.
1907 B, 256, 761.
Jordan, D. S. 1923 A, 113.
Jordan and Gilbert 1882 A, 82.
Kesteven, H. L. 1926 A, 139 (Polyodon).
Kingsley, J. S. 1925 A, 32, fig. 35 (Polyodon).
Köstlin, O. 1844 A ("spatulariden").
Lakjer, T. 1927 A, 289, fig. 102 (Polyodon).
Leunis and Ludwig 1883 A, 773.
Luther, A. 1913 A, 8, figs. 2, 3, 9, 10 (Polyodon).
1913 B, 9, figs. 3, 5, 14, 22 (Polyodon).
Meckel, J. F. 1825 A (Polyodon).
Meek, A. 1916 A, 51.
Meissner, W. 1907 B, 32 (Polyodon).
Mivart, St. G. 1878 B, 331 (Polyodon).
Owen, R. 1845 B, 68 (Spatulariæ).
1848 B, 86 (Polyodon).
1866 A, 39, 612 (Planirostra).
1868 A, 901 (Planirostra).
Rabl, C. 1901 A, 479 ("polyodontiden").
Rauther, M. 1913 A, 1099.
Reynolds, S. H. 1897 A, 32, 66.
Scharff, R. F. 1911 A, 88 (Polyodon).
Sewertzoff, A. N. 1923 B.
1926 A, 513, 524.
1926 E, 560 (Spatularidæ).
Stannius, H. 1854 A (Spatulariæ).
Stensiö, E. A. 1925 A, 120, 216, 224 ("polyodontids").
Stromer, E. 1925 B, 357, 358.
Traquair, R. H. 1912 A, 168.
Wagner, G. 1904 A, 555.
Wagner, R. 1843 A (Polyodon).
Wallace, A. R. 1876 A, ii, 459.
Watson, D. M. S. 1925 A, 829, 850, 864, figs. 7, 8 (Chondrosteus).
Whitehouse, R. H. 1910 B, 594, pl. xlvii, fig. 3.
Wiedersheim, R. 1881 B, 327 (Polyodon).
Young, J. 1866 D, 234 (Chondrosteus).
Zittel and Koken 1911 A, 96.
Zittel and Schlosser 1923 A, 95.
Zittel and Woodward 1902 A, 74.
Zograf, N. 1887 A, 70 (Polyodon).

Crossopholis Cope. Type *C. magnicaudatus* Cope.

Hay, O. P. 1902 A, 372.
Arldt, T. 1923 A, 493.
Bridge, T. W. 1904 A, 492.
Jordan, D. S. 1920 C, 434 (Crossophilus).
Traquair, R. H. 1900 C, 507.
1912 A, 168.
Zittel and Koken 1911 A, 96.
Zittel and Schlosser 1923 A, 95.
Zittel and Woodward 1902 A, 74.

Crossopholis magnicaudatus Cope.

Hay, O. P. 1902 A, 372.
Cockerell, T. D. A. 1908 C, 162.
Hussakof, L. 1908 A, 69.
Jordan, D. S. 1905 A, ii, 21.
1907 B, 257.
Eocene (Green River); Wyoming.

Order PYCNODONTÆ Agassiz.

Unless otherwise indicated the authors, as cited, use the term *Pycnodonti* for this order.

Agassiz, L. 1832 A, 141 (Pycnodontæ).
Hay, O. P. 1902 A, 372.
Agassiz, L. 1833 A, 478 (Pyconodontæ).
1844 C, 267 ("pycnodontes").
1844 D, 142 ("pycnodontes").
Bronn, H. G. 1849 A, 780, seq. (Pycnodontes).
Carus, V. 1875 A, 592 (Pycnodontini).
Deecke, W. 1913 A, 87 ("pycnodonten").
Diener, C. 1909 A, 49.
Egerton, P. G. 1849 A, 329.
1854 A, 369.
Fitzinger, L. J. 1873 A, 50 (Pycnodontes).
Fowler, H. W. 1911 A, 145.
Frost, G. A. 1913 A, 219 (Dapedius).
Giebel, C. G. 1855 A, 111, 112, 113 (Pycnodontes).
Gregory, W. K. 1907 D, 448, 465.
Jordan, D. S. 1923 A, 114.
Kingsley, J. S. 1885 A, 94 (Pycnodontini).
Hennig, E. 1906 A, 137 ("pyknodonten").
Hennig, E. 1907 A, 36 ("pyknodonten").
Hoernes, R. 1886 A, 552 (Lepidopleuridæ).
Huxley, T. H. 1861 D, 448 ("pycnodonts").
1862 A, 1.
1867 F, 167 (Pycnodonta).
Jaekel, O. 1911 A, 69, 84.
Jordan, D. S. 1905 A, ii, 22.
1907 B, 258, 761.
Lütken, C. 1868 C (Pycnodontes).
Pompeckj, J. F. 1913 A, 1139, 1142.
Priem, F. 1908 B, 15 ("pycnodontes").
Regan, C. T. 1909 B, 76 (Pycnodontoidei).
Sauvage, E. 1867 A, 75 ("pycnodontes").
Steinmann, G. 1927 A, 17, 64 ("pycnodonten").
Stromer, E. 1905 C, 185 (Euganoidei).
1925 B, 348, 350, 365 (Pycnodonti).
Woodward, A. S. 1893 F, 433, 487 ("pycnodonts").
1917 B, 385 ("pycnodonts").
Zittel and Koken 1911 A, 102.
Zittel and Schlosser 1923 A, 102.

PYCNODONTIDÆ Owen.

Owen, R. 1846 E, 50.
Hay, O. P. 1902 A, 372.
Abel, O. 1912 F, 488 ("pycnodontiden").
1919 A, 205.
1922 F, 77.
Agassiz, L. 1835 B, 331 (Pycnodontes).
1835 H, 225 (Pycnodontæ).
Arldt, T. 1907 D, 678.
1923 A, 495 ("pycnodontiden").
Bridge, T. W. 1904 A, 498.
Cunningham, J. T. 1897 A, 498.
Dean, Gudger, Henn 1923 A, 398, 623.
Eastman, C. R. 1898 E, 183 ("pycnodonts").
Egerton, P. G. 1877 A, 54 ("pycnodonts")
Fowler, H. W. 1911 A, 145.
Goodrich, E. S. 1908 A, 767.
1909 A, 337.
Gregory, W. K. 1907 D, 448.
1923 A, 238, 240.
Heckel, J. 1850 B, 143 ("pycnodonten").
Heilprin, A. 1887 A, 94.
Hennig, E. 1906 A, 137.
Hermann, R. 1907 A, 195, fig. 1 ("pycnodonten")
Hoernes, R. 1886 A, 553.
Jordan, D. S. 1905 A, ii, 22.
1907 B, 258, 761.
Jordan, D. S. 1923 A, 114.
Leriche, M. 1910 A, 462, 465 ("pycnodontidés").
Leunis and Ludwig 1883 A, 776.
Lütken, C. 1871 A, 288 ("pycnodontiens").
Owen, R. 1866 A, 12, 378.
Priem, F. 1903 A, 403 ("pycnodontes").
Regan, C. T. 1923 B, 455, 456.
Sauvage, H. E. 1902 A, 542 ("pycnodontes").
Savornin, J. 1915 A, 368.
Schlosser, M. 1917 A, 135, 136, 138, 140, 142, 148 ("pycnodontiden").
Scupin, H. 1896 A, 173, 184.
Steinmann, G. 1907 A, 411.
Stromer, E. 1905 C, 185.
Watson, D. M. S. 1925 A, 866 ("pycnodonts").
Woodward, A. S. 1893 F, 433.
1898 B, 101.
1907 A, 194.
1912 A, (1909), 162.
1921 A, 181.
1921 C, 181.
1922 C, 91.
Zittel and Koken 1911 A, 102 (No family name).
Zittel and Schlosser 1923 A, 102 (No family name).
Zittel and Woodward 1902 A, 85.

MACROMESODON Blake. Type *Gyrodus macropterus* Agassiz.

Blake, J. F. 1905 A, 32.
Unless otherwise indicated the authors, as quoted, apply to this genus the name *Mesodon*. This is, however, preoccupied.
Hay, O. P. 1902 A, 372 (Typodus; preoccupied).
Arldt, T. 1923 A, 495.
Deecke, W. 1913 A, 83.
Giebel, C. G. 1855 A, 112.
Goodrich, E. S. 1909 A, 337, 339, fig. 319.
Gorjanovic-Kramberger, K. 1905 A, 219.
Heckel, J. J. 1850 A, 361, 365.
Hennig, E. 1906 A, 172, 199.
1907 A, 360.
Jordan, D. S. 1923 A, 114 (Typodus, preoccupied).
Sauvage, H. E. 1902 A, 545.
Steinmann, G. 1927 A, 54, text-fig. 14.
Traquair, R. H. 1911 A, 29.
Woodward, A. S. 1890 C, 296.
1910 B, 468.
Zittel and Koken 1911 A, 103.
Zittel and Schlosser 1923 A, 103.
Zittel and Woodward 1902 A, 87.

Macromesodon abrasus (Cragin).

Hay, O. P. 1902 A, 372 (Typodus).
Lower Cretaceous (Fredericksburg); Kansas.

Macromesodon diastematicus (Cope).

Hay, O. P. 1902 A, 372 (Typodus).
1917 B, 4 (Typodus).
Montgomery, T. H. 1904 A, 57 (Mesodon).
Lower Cretaceous (Fredericksburg); Texas.

Macromesodon dumblei (Cope).

Hay, O. P. 1902 A, 373 (Typodus).
1917 B, 4 (Typodus).
Montgomery, T. H. 1904 A, 56 (Microdus); 57 (Mesodon dumblianus).
Lower? Cretaceous; Texas.

Macromesodon valens Hay.

Hay, O. P. 1917 B, 5, pl. i, fig. 2 (Typodus).
Lower Cretaceous; Texas.

PROSCINETES Gistel. Type *Microdon elegans* Agassiz.

Gistel, J. 1848, Naturges. Thierr. f. höhere Schulen, x (To replace *Microdon*, preoccupied). Unless otherwise indicated the authors, as cited, use for this genus the preoccupied name *Microdon*.
Agassiz, L. 1883 A, 479.
1835 H, 228.
Arldt, T. 1923 A, 495.
Bronn, H. G. 1848 A, 725.
1849 A, 667.
Coulon, L. 1903 A, 147.
Deecke, W. 1913 A, 83.
Egerton, P. G. 1855 A, 8 L, 1.
Giebel, C. G. 1855 A, 111.
Goodrich, E. S. 1909 A, 337, fig. 317.
Hay, O. P. 1899 E, 788 (Polysephus).
1917 B, 6 (Pycnomicrodon, *laps. mem.*).
Heckel, J. J. 1850 A, 361.
1856 A, 201.
Hennig, E. 1906 A, 172, 199.
Jordan, D. S. 1919, Proc. Acad. Nat. Sci. Phila., 1918, 336 (Proscinetes).
1919 B, 237 (Proscinetes).
Owen, R. 1845 B, 73, pl. xliii, fig. 1.
Pompeckj, J. F. 1913 A, 1143.
Priem, F. 1911 C, 10, pl. iii.
Steinmann, G. 1927 A, 50.
Vetter, B. 1881 A, 33.
Woodward A. S. 1917 B, 385.
1919 A (1918), 445, fig. 1.
Zittel and Koken 1911 A, 102.
Zittel and Schlosser 1923 A, 102, figs. 172, 173.
Zittel and Woodward 1902 A, 86.

Proscinetes texanus (Gidley).

Gidley, J. W. 1913 C, 445, figs. 1, 2 (Microdon).
Hay, O. P. 1917 B, 6 (Pycnomicrodon).
Lower Cretaceous: Texas.

CŒLODUS Heckel. Type *C. saturnus* Heckel.

Hay, O. P. 1902 A, 373.
Coulon, L. 1903 A, 149.
Egerton, P. G. 1877 A, 49, pl. iii, fig. 1.
Goodrich, E. S. 1909 A, 337, fig. 317.
Hennig, E. 1906 A, 188.
Jordan, D. S. 1919 B, 270.
Leriche, M. 1906 C, 413.
Priem, F. 1903 A, 403.
1908 B, 70, pl. ii, fig. 4.
1909 B, 325.
Sauvage, H. E. 1902 A, 550.
Schlosser, M. 1917 A, 138, 140.
Steinmann, G. 1927 A, 50.
Storms, R. 1891 A, 150.
Woodward, A. S. 1893 F, 488, 491.
1895 G, 208, pl. viii.
1896 E, 70.
1912 A (1909), 165, text-figs. 46, 47.
1917 B, 386.
1919 A (1918), 64, text-fig. 24.
Zittel and Koken 1911 A, 104.
Zittel and Schlosser 1923 A, 105.
Zittel and Woodward 1902 A, 88.

Cœlodus brownii Cope.

Hay, O. P. 1902 A, 373.
Gidley, J. W. 1913 C, 447.
Lower Cretaceous (Comanche); Oklahoma.

Cœlodus decaturensis Gidley.

Gidley, J. W. 1913 C, 447, fig. 4.
Hay, O. P. 1917 B, 7.
Lower Cretaceous; Texas.

Cœlodus fabadens Gidley.

Gidley, J. W. 1913 C, 446, fig. 3.
Hay, O. P. 1917 B, 7.
Lower Cretaceous; Texas.

Cœlodus stantoni Williston.

Hay, O. P. 1902 A, 373.
Gidley, J. W. 1913 C, 447.
Lower Cretaceous (Kiowa shales); Kansas.

PYCNODUS Agassiz. Type *Zeus platessus* Blainv.

Hay, O. P. 1902 A, 373.
Agassiz, L. 1833 A, 479.
1835 H, 229.
Arldt, T. 1923 A, 495.
Bronn, H. G. 1848 B, 1064.
1849 B, 665.
Coulon, L. 1903 A, 147.
Egerton, P. G. 1855 A, 8 L, 1, pl. x.
1877 A, 50.
Fowler, H. W. 1911 A, 146.
Heilprin, A. 1887 A, 302.
Hennig, E. 1906 A, 199.
1912 A, 490.
Hoernes, R. 1886 A, 553.
Jordan and Evermann 1917 A, 144.
Leriche, M. 1906 C, 420.
Mantell, G. A. 1844 A, 640, pl. i, fig. 3; text-fig. 131.
Priem, F. 1903 A, 403.
1908 B, 109, fig. 54.

Ryder, J. 1885 E, 95.
Sauvage, E. 1867 A, 77.
Savornin, J. 1915 A, 370.
Schlosser, M. 1917 A, 140, 142.
Stromer, E. 1905 C, 185.
Woodward, A. S. 1917 B, 387.
Zittel and Koken 1911 A, 105.
Zittel and Schlosser 1923 A, 105.
Zittel and Woodward 1902 A, 88.

Pycnodus carolinensis Emmons.

Hay, O. P. 1902 A, 373.
Cretaceous ("Miocene"); North Carolina.

Pycnodus comminuens Hay.

Hay, O. P. 1917 B, 3, pl. i. fig. 1.
Lower Cretaceous; Texas.

Pycnodus phaseolus Hay.

Hay, O. P. 1902 A, 373.
Fowler, H. W. 1911 A, 146, fig. 90.
Upper Cretaceous; Mississippi: (Navesink?); New Jersey.

Pycnodus planidens Hay.

Hay, O. P. 1917 B, 7.
Lower Cretaceous; Texas.

Pycnodus robustus Leidy.

Hay, O. P. 1902 A, 373.
Fowler, H. W. 1911 A, 147, fig. 91.
Cretaceous; New Jersey.

Pycnodus sp. indet.

Hay, O. P. 1902 A, 373. (Triassic (Chatham); North Carolina.

HADRODUS Leidy. Type *H. priscus* Leidy.

Hay, O. P. 1902 A, 373.
Jordan, D. S. 1923 A, 114.

Hadrodus priscus Leidy.

Hay, O. P. 1902 A, 373.
Cretaceous; Mississippi.

ANOMŒODUS Forir. Type *Pycnodus subclavatus* Agassiz.

Forir, H. 1887, Ann. Soc. Géol. Belgique, xiv, Mém., 25.
Leriche, M. 1906 C, 411.
Priem, F. 1909 B, 325.
1912 B, 266.
Woodward, A. S. 1893 F, 487, pls. xvi, xvii.
1893 G, 488, pls. xvi, xvii.
1895 A, 258.
1895 G, 209, pl. viii.
1912 A (1909), 162, pl. xxxv.
1917 B, 387.
Zittel and Schlosser 1923 A, 105.
Zittel and Woodward 1902 A, 88.

Anomœodus latidens Gidley.

Gidley, J. W. 1913 C, 448, fig. 5.
Upper Cretaceous (Selma or Ripley); Mississippi.

Anomœodus mississippiensis Gidley.

Gidley, J. W. 1913 C, 449, fig. 6.
Upper Cretaceous (Coffee Sand of Eutaw or Selma chalk); Mississippi.

Anomœodus sp. indet.

Gidley, J. W. 1926 F, 192, pl. lxxi, fig. 11 (Anomœodus). Upper Cretaceous (Ripley; Tennessee.

URANOPLOSUS Sauvage. Type *U. cotteaui* Sauvage.

Hay, O. P. 1902 A, 373.
Sauvage, H. E. 1902 A, 547.

Uranoplosus arctatus Cope.

Hay, O. P. 1902 A, 373.
Lower Cretaceous (Comanche); Oklahoma.

Uranoplosus flectidens Cope.

Hay, O. P. 1902 A, 373.
Lower Cretaceous (Comanche); Oklahoma.

Order HOLOSTEI Müller.

Müller, J. 1845 A, 119, 137.
Hay, O. P. 1902 A, 374.
Allis, E. P. 1905 A, 404, 495.
1915 A, 621.
1918 A, 242.
1918 B, 263.
1919 A, 374.
1919 B, 73.
1919 C, 256.
1922 A, 152.
1922 B.
1923 A, 52.
1923 B, 155.
1925 A, 75.
1926 A, 168.
Arldt, T. 1923 A, 494 ("holostier").
Boulenger, G. A. 1904 A, 162.
Bridge, T. W. 1878 A, 722 (Teleosteoidei).
1904 A, 495.
Bronn, H. G. 1849 A, 830, seq.
Carus, V. 1875 A, 590 (Lepidosteidei).
Cunningham, J. T. 1912 A, 240, 246, 261, 382.
Dean, Gudger, Henn 1923 A, 684.
Dombrowski, B. A. 1925 A, 70, fig. 3.
Ebner, V. 1896 A, 146.
Egerton, P. G. 1852 C, 6 L, 6.
Gaupp, E. 1898 B, 844, 863 ("knochenganoiden").
Gegenbaur, C. 1866 A, 123.
Goodrich, E. S. 1909 A, 321.
Greene, J. R. 1861 A, 227.

Gregory, W. K. 1907 D, 448, 464, pl. xxix (Lepidosteoidei).
1920 A, 220.
1923 A, 238.
Hase, A. 1913 A, 147.
Hasse, C. 1893 C, 76 ("knochenganoiden").
Hilzheimer, M. 1913 A, 471 ("knochenganoiden").
Hubbs, C. L. 1919 A, 570.
Jaekel, O. 1911 A, 69, 73.
Jordan, D. S. 1905 A, ii, 23, 578 (Lepidostei).
1907 B, 259, 761 (Lepidostei).
1923 A, 115.
Kehrer, F. A. 1896 A, 352 ("knochenganoiden").
Kingsley, J. S. 1885 A, 92.
Klaatsch, H. 1893 B, 655 ("knochenganoiden").
Leunis and Ludwig 1883 A, 775 (Euganoidei).
Lönnberg, E. 1901 A.
Luther, A. 1913 B, 12, 22, 52.
Matthes, E. 1921 A, 221 ("knochenganoiden").
Meek, A. 1916 A, 48, 52.
Miall, L. C. 1872 A, 34.
Owen, R. 1845 B, 74 ("sauroids").
Parker, W. K. 1881 C, 71 ("holostean ganoids").
Parker and Haswell 1897 A, 203.
Pehrson, T. 1922 A, 39.
Pompeckj, J. F. 1913 A, 1139, 1141.
Rauther, M. 1913 A, 1100.
Regan, C. T. 1904 A, 346.
1909 B, 76.
1912 B, 838.
1923 B, 457 (Holostei; Neopterygii, in part).
Reynolds, S. H. 1897 A, 67, 68, 105, 110, 114, 121, 126.
Ridewood, W. G. 1896 A, 389.
Romer, A. S. 1924 A, 128, 136.
Ryder, J. 1886 A, 74.
Schlesinger, G. 1909 A, (147).
Schmalhausen, J. J. 1912 A, 529.
1913 A, 61.
1913 C.
1923 B, 544.
Sewertzoff, A. N. 1918 A, 207.
1923 B.
1925 A, 276.
1926 A, 509, 523 ("holosteans").
1926 C, 42.
1926 D, 76, 83.
1926 F, 274.
Solger, B. 1880 A, 367.
Stannius, H. 1854 A.
Stensiö, E. A. 1925 A, *passim* ("ganoids," in part).
Suschkin, P. P. 1910 A, 250.
Swinnerton, H. W. 1905 A, 378 ("holosteans").
Terra, P. 1911 A, 205.
Traquair, R. H. 1880 A, 157 (Lepidosteidæ).
1900 C, 508 (Lepidosteoidei).
Ussow, S. 1900 A, 231 ("knochenganoiden").
Wallace, A. R. 1876 A, ii, 458.
Watson, D. M. S. 1925 A, 816, 851, 863, 868.
Whitehouse, R. H. 1910 B, 595.
Woodward, H. 1878 A, 22 (Lepidosteidæ).

Suborder LEPISOSTEIFORMES, new name.

Unless otherwise indicated the writers, as cited, use the name Ginglymodi.
Hay, O. P. 1902 A, 374.
Agassiz, L. 1832 A, 140 (Lepidostei).
Allis, E. P. 1909 A, 201.
Arldt, T. 1907 D, 656.
Beer, G. R. 1926 A, 283 (Lepidosteoidei).
Cockerell, T. D. A. 1913 B, 121.
Cope, E. D. 1871 T, 452.
1891 N, 22.
Goodrich, E. S. 1904 A, 495 (Aëtheospondyli).
1909 A, 340 (Lepidosteoidei).
Gregory, W. K. 1907 D, 448, 466.
Hoernes, R. 1886 A, 554 (Lepidosteidei).
Huxley, T. H. 1861 D, 442 (Lepidosteidæ).
Jaekel, O. 1911 A, 82 (Lepidostei).
Jordan, D. S. 1905 A, ii, 24, 29, 572.
1907 B, 761.
Jordan, D. S. 1923 A, 115.
Jordan and Gilbert 1882 A, 89.
Kiaer, J. 1924 A, 95 (Euganoida).
Kingsley, J. S. 1885 A, 96.
Pompeckj, J. F. 1913 A, 1145 (Lepidosteoidei).
Regan, C. T. 1909 B, 77.
1912 B, 841 (Aethiospondyli).
1923 B, 459.
Scupin, H. 1896 A, 166, 182.
Stannius, H. 1854 A (Lepidosteini).
Stromer, E. 1912 A, 31 (Lepidostei).
1925 B, 354, 365 (Lepidostei).
Traquair, R. H. 1877 B, 8 (Lepidosteoidei).
1911 A, 16 (Lepidosteoidei).
Zittel and Koken 1911 A, 105 (Orthoganoidei).
Zittel and Schlosser 1923 A, 105 (Orthoganoidei).
Zittel and Woodward 1902 A, 79 (Lepidostei).

LEPIDOTIDÆ Owen.

Unless otherwise indicated the authors, as quoted, use the name Semionotidæ for this family.
Hay, O. P. 1902 A, 374 (Lepidotidæ).
Abel, O. 1906 C, 84.
1912 F, 488 ("semionotiden").
1919 A, 197, fig. 170.
1920 A, 343 ("seminotiden").
1922 F, 77.
Arldt, T. 1907 D, 682 (Sphærodontiræ).
Bridge, T. W. 1904 A, 497.
Carus, V. 1875 A, 590 (Lepidotini).
Deecke, W. 1926 A, 185.
Eastman, C. R. 1905 B, 72.
1911 A, 18, 28, 57.
1914 A, 139, 140.
1917 A, 282.
Fitzinger, L. J. 1873 A, 51 (Lepidoti).
Gill, E. L. 1923 A, 38.
Goodrich, E. S. 1904 A, 495.
1908 A, 769.
1909 A, 334.
Gorjanović-Kramberger, K. 1905 A, 195.
Gregory, W. K. 1907 D, 448 (Lepidotidæ, Semionotidæ).

Gregory, W. K. 1923 A, 238, 241 (Semionotidæ, Semionotoidea).
Hay, O. P. 1901 B, 72.
Jordan, D. S. 1905 A, ii, 24, 591 (Lepidotidæ, Semionotidæ).
1907 B, 761 (Lepidotidæ).
1923 A, 114.
Pompeckj, J. F. 1913 A, 1142 (Lepidotidæ).
Priem, F. 1908 B, 14 ("sémionotidés").
Regan, C. T. 1923 B, 455, 460.
Schlosser, M. 1917 A, 136, 138 ("stylodontiden," "sphacrodontiden").
Scupin, H. 1896 A, 160, 182 (Sphærodontidæ).
Stensiö, E. A. 1921 A, 253.
1925 A, 224.
Stolley, E. 1920 A, 77, 79 (Lepidotidæ, Semionotidæ).
Swinnerton, H. H. 1925 A, 98 (Semionotidæ).
Traquair, R. H. 1911 A, 16.
Watson, D. M. S. 1925 A, 866 ("semionotids").
Woodward, A. S. 1898 B, 95.
1912 A (1909), 161.
1922 C, 90 (Semionotidæ).
Zittel and Schlosser 1923 A, 108 (Lepidotinæ).
Zittel and Woodward 1902 A, 80 (Stylodontidæ); 81 (Semionotidæ).

LEPIDOTES Agassiz. Type *L. gigas* Agassiz = *Cyprinus elvensis* Blainville.

Agassiz, L. 1832 A, 145.
Unless otherwise indicated the authors here quoted spell the name *Lepidotus*.
Hay, O. P. 1902 A, 374.
Abel, O. 1912 F, 490, fig. 371 C.
1919 A, 201, figs. 156, 157.
1920 A, 343, fig. 543.
Agassiz, A. 1877 A, 124.
Agassiz, L. 1833 A, 474.
1835 H, 213.
1844 C, 265.
Allis, E. P. 1909 A, 201.
Arldt, T. 1923 A, 495.
Bronn, H. G. 1848 A, 632 (Lepidotes, Lepidotus).
1849 A, 659.
Coulon, L. 1903 A, 142.
Cross and Howe 1905 A, 486.
Dabelow, A. 1926 A, 97, fig. 1.
Day, H. 1915 A, 432.
Dean, B. 1914 A, 59.
Dean, Gudger, Henn 1923 A, 623.
Deecke, W. 1913 A, 80, 81.
Drevermann, F. 1912 A, 6, fig.
Eastman, C. R. 1917 A, 278, 282.
Egerton, P. G. 1852 C, 6D, 1, pl. iii.
1854 A, 368.
Frost, G. A. 1913 A, 220.
Gaudry, A. 1896 A, 80, fig. 52.
Gervais, P. 1852 A, explan. pl. lxvii.
1859 A, 516, pl. lxvii.
Gill, E. L. 1923 A, 22.
Goodrich, E. S. 1908 A, 756, 758.
1909 A, 335, fig. 316.
Gregory, W. K. 1923 A, 239.
1924 A, 1.
Heilprin, A. 1887 A, 302.
Hennig, E. 1906 A, 186, fig. 12.
1912 A, 489.
1914 A, 269, pl. xxiii; text-figs. 3, 4.
1915 E, 51.
1920 B, 112.
Hoernes, R. 1886 A, 556.
Huxley, T. H. 1862 A, li.
Jaekel, O. 1905 C, 141, fig. 5.
1906 A, 23, fig. 14.
1911 A, 82, figs. 89, 90.
Jordan D. S. 1917 A, 141 (Lepidotes).
Klaatsch, H. 1890 A, 144.
Lankester, E. R. 1905 A, 250, fig. 179.
Lee, J. E. 1860 A, 458, pl. xii.
Leriche, M. 1902 B, 130 (Lepidotus).
Lütken, C. 1868 C, 44.
1871 A, 287.
Pompeckj, J. F. 1913 A, 1142, fig. 49.
Priem, F. 1908 A, 1, pls. i, ii.
1908 B, 22, 26, 31.
Regan, C. T. 1923 B, 455.
Reynolds, S. H. 1897 A, 110.
Ridewood, W. G. 1896 A, 385, fig. 13.
Sauvage, E. 1867 A, 67.
Schellwien, E. 1901 A.
Schlosser, M. 1917 A, 140.
Scupin, H. 1896 A, 160, pl. ix, figs. 6-8.
Steinmann, G. 1927 A, 12.
Stensiö, E. A. 1921 A, 174.
1925 A, 64.
Stolley, E. 1920 A, 77.
Stromer, E. 1925 B, 352, 359.
Tomes, C. S. 1898 B, 450.
Traquair, R. H. 1900 C, 507.
1911 A, 16.
Watson, D. M. S. 1925 A, 824, 867.
Woodward, A. S. 1888 M, 139.
1896 E, 70.
1898 B, 96, fig. 69.
1906 C, 279.
1908 A, 359, pl. xliii, figs. 1, 2.
1912 A (1909), 161.
1915 B, lxxiii.
1919 A (1916), 26, pls. vi-x; text-figs. 12-18.
1921 A, 181.
1922 C, 91, fig. 97.
Zittel and Koken 1911 A, 108.
Zittel and Schlosser 1923 A, 11, 109, figs. 13, 185-187.
Zittel and Woodward 1902 A, 82.

Lepidotes? lacotanus Gregory.

Gregory, W. K. 1924 A, 1, figs. 1, 2 (Lepidotus?).
Lower Cretaceous (Lacota); South Dakota.

Lepidotes walcotti Eastman.

Eastman, C. R. 1917 A, 283, pl. xii, fig. 4; pl. xiii, fig. 3 (Lepidotus). Triassic; Utah.

Lepidotes sp. indet.

Hay, O. P. 1902 A, 374 (Lepidotus). Cretaceous (Kiowa Shales); Kansas.

ACENTROPHORUS Traquair. Type *A. varians* (Kirkby).

Hay, O. P. 1902 A, 374.
Abel, O. 1919 A, 199.
Arldt, T. 1923 A, 495.
Eastman, C. R. 1905 A, 56.
1905 B, 94 (Acentrophus).
1911 A, 29.
Gill, E. L. 1923 A, 19, text-figs. 1-19.
1923 B, 466, fig. 1.
Gregory, W. K. 1923 A, 239.
Jordan, D. S. 1905 A, ii, 23.
Kirby, J. W. 1862 A, 267 (Palæoniscus varians).
1864 A, 353, pl. xviii, fig. 2 (Palæoniscus varians).
Traquair, R. H. 1900 C, 507.
Watson, D. M. S. 1925 A, 824, 866.
Woodward, A. S. 1915 B, lxxiii.
1924 A, 114.
Zittel and Woodward 1902 A, 80.

Acentrophorus chicopensis Newb.

Hay, O. P. 1902 A, 374.
Eastman, C. R. 1905 B, 94.
1911 A, 28, 71.
Emerson, B. K. 1898 A, 400.
Hussakof, L. 1908 A, 59.
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 211.
Triassic (Newark); New Jersey, Connecticut.

SEMIONOTUS Agassiz. Type *S. bergeri* Agassiz.

Hay, O. P. 1902 A, 375.
Abel, O. 1919 A, 200, figs. 153, 154.
Agassiz, L. 1832 A, 144.
1833 A, 474.
1835 H, 212.
1844 C, 265.
1877 A, 124.
Alessandri, G. 1910 A, 66.
Arldt, T. 1907 D, 338.
1923 A, 493 (Ischypterus); 495 (Semionotus).
Barkas, W. J. 1874 D, 551 (Ischypterus).
Bronn, H. G. 1848 B, 1132.
1849 A, 659.
Dean, Gudger, Henn 1923 A, 623.
Deecke, W. 1913 A, 74 (Ischypterus); 80 (Semionotus).
1926 A, 185.
Eastman, C. R. 1905 B, 68, 73, figs. 9-11.
1911 A, 21, 24, 40, 57.
1914 A, 146.
Eaton, G. F. 1903 A, 259.
Emerson, B. K. 1898 A, 400 (Ischypterus).
Giebel, C. G. 1855 A, 113.
Gorjanovic-Kramberger, K. 1905 A, 195.
Gregory, W. K. 1923 A, 239.
Hay, O. P. 1901 B, 72.
Heckel, J. F. 1850 A, 365.
Heilprin, A. 1887 A, 302 (Ischypterus).
Hennig, E. 1915 E, 49.
Hoernes, R. 1886 A, 555.
Huene, F. 1922 H, 153.
1926 E, 7.
Jordan and Evermann 1917 A, 140.
Koken, E. 1893 B, 278.
Philippi and Frech 1903 A, 12, pls. v, vi.
Schellwien, E. 1901 A.
Scupin, H. 1896 A, 168, pl. x, fig. 3.
Steinmann, G. 1907 A, 412.
1927 A, 74, 76.
Stensiö, E. A. 1925 A, 86.
Stolley, E. 1920 A, 76.
Stromer, E. 1925 B, 349.
Swinnerton, H. H. 1925 A, 87.
Traquair, R. H. 1900 C, 507.
Watson, D. M. S. 1923 A, 472.
1925 A, 866.
Woodward, A. S. 1888 M, 138, pl. vi.
1890 E, 367.
Zittel and Koken 1911 A, 106.
Zittel and Schlosser 1923 A, 106, fig. 178.
Zittel and Woodward 1902 A, 80.

Semionotus agassizii (W. C. Redfield).

Hay, O. P. 1902 A, 375 (S. agassizii, S. marshii).
Bayley, Kümmel, and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 80, pl. i; pl. ii, figs. 5, 9, 10, 12; pl. iii, figs. 1, 2; pls. vii, viii (S. marshii a syn.).
1911 A, 28, 61, pls. i, ii; text-fig. 8 (S. agassizii); 63 (Ischypterus marshii).
Eaton, G. F. 1903 A, 260, 264, pl. v, figs. 5, 7, 10, 12; pl. vi, figs. 1, 2 (S. marshii).
Hussakof, L. 1908 A, 98.
Jordan, D. S. 1905 A, ii, 24.
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 210, 214 (Ischypterus agassizii, I. marshii).
Redfield, J. H. 1888 A, 30 (Palæoniscus).
Smith, J. H. 1900 A, 500, 503, figs. (Ischypterus).
Triassic (Newark); New Jersey, Massachusetts.

Semionotus alatus (Newb.).

Hay, O. P. 1902 A, 375.
Lyman, B. S. 1894 A, 214 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus beardmori (Smith).

Smith, J. H. 1900 A, 502, 503, fig. (Ischypterus).
Eastman, C. R. 1905 A, 65 (Ischypterus beardmorei).
1911 A, 71 (Ischypterus beardmorei).
Triassic (Newark); New Jersey.
A doubtful species.

Semionotus braunii (Newb.).

Hay, O. P. 1902 A, 375.
Bayley, Kümmel, and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 93.
1911 A, 28, 71.
Hussakof, L. 1908 A, 99.
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 204 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus elegans (Newb.).

Hay, O. P. 1902 A, 375.
Bayley, Kümmel, and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 91, pl. xii.
1911 A, 28, 71.
1917 A, 278, 282, pl. xv, fig. 3.
Hussakof, L. 1908 A, 99.
Loper, S. W. 1893 A, 75 (Ischypterus).
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 214 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus fultus (J. H. Redfield).

Hay, O. P. 1902 A, 375.
Agassiz, L. 1833 A, 472 (Palæoniscus).
1835 H, 206 (Palæoniscus).
Bayley, Kümmel, and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 83, pl. ii, figs. 1-4; pl ix, text-fig. 12.
1911 A, 28, 63, 64, pl. iii.
Eaton, G. F. 1903 A, 261, pl. v, figs. 1-4.
Hussakof, L. 1908 A, 100.
Lambe, L. M. 1915 B, 120 (This species?).
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 209, 214 (Ischypterus fultus); 214 (I. macropterus).
Powers, S. 1916 A, 115, 121.
Redfield, J. H. 1888 A, 34 (Palæoniscus).
Rogers, A. F. 1924 A, 546.
Schellwien, E. 1901 A, 29 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus gigas (Newb.).

Hay, O. P. 1902 A, 375.
Bayley, Kümmel, and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 83.
1911 A, 28.
Hussakof, L. 1908 A, 100.
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 214 (Ischypterus).
Triassic (Newark), New Jersey.

Semionotus lenticularis (Newb.).

Hay, O. P. 1902 A, 375.
Lyman, B. S. 1894 A, 214 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus lineatus (Newb.).

Hay, O. P. 1902 A, 375.
Eastman, C. R. 1905 B, 89, pls. x, xi.
1911 A, 28, 71.
Hussakof, L. 1908 A, 100.
Lyman, B. S. 1894 A, 214 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus micropterus (Newb.).

Newberry, J. S. 1888 A, 31, pl. iv, figs. 1, 2; pl. xii, fig. 2 (Ischypterus).
Hay, O. P. 1902 A, 375.
Eastman, C. R. 1905 B, 87, pl. ii, figs. 6-8, 11, 13; text-fig. 13.
1911 A, 28, 67, pl. iv.
1914 A, 146, pl. xxxii, fig. 1.
Eaton, G. F. 1903 A, 263, pl. v, figs. 6-8, 11, 13.
Hussakof, L. 1908 A, 100.
Lull, R. S. 1917 D, 109.
Lyman, B. S. 1894 A, 209 (Ischypterus).
Triassic (Newark); Connecticut.

Semionotus minutus (Newb.).

Hay, O. P. 1902 A, 375.
Eastman, C. R. 1911 A, 71.
Hussakof, L. 1908 A, 101.
Lyman, B. S. 1894 A, 209 (Ischypterus).
Triassic (Newark); Connecticut.

Semionotus modestus (Newb.).

Hay, O. P. 1902 A, 376.
Lyman, B. S. 1894 A, 214 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus newberryi (Loper).

Loper, S. W. 1893 A, 75, fig. 2 (Ischypterus).
Eastman, C. R. 1905 A, 651.
Loper, S. W. 1899 A, 98 (Ischypterus).
Triassic (Newark); Connecticut.
A doubtful species.

Semionotus ovatus (W. C. Redfield).

Hay, O. P. 1902 A, 376.
Bayley, Kümmel, and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 78, pls. 4-6.
1911 A, 28, 69.
Eaton, G. F. 1903 A, 266.
Hussakof, L. 1908 A, 100.
Lansing, G. Y. 1854 A, 62 ("Eschypterus," This species?).
Lull, R. S. 1917 D, 110.
Lyman, B. S. 1894 A, 205, 208, 209, 214 (Ischypterus).
Philippi and Frech 1903 A, 12, pl. vi.
Redfield, J. H. 1888 A, 27 (Palæoniscus).
Smith, J. H. 1900 A, 504, fig. (Ischypterus).
Woodward, A. S. 1890 E, 367 ("Tetragonolepis," This species?).
Triassic (Newark); New Jersey, Connecticut, Virginia.

Semionotus parvus (W. C. Redfield).

Hay, O. P. 1902 A, 376.
Eastman, C. R. 1911 A, 71.
Loper, S. W. 1893 A, 75 (Ischypterus).
Lyman, B. S. 1894 A, 205, 209, 210, 214 (Ischypterus).
Triassic (Newark); Massachusetts.

Semionotus robustus (Newb.).

Hay, O. P. 1902 A, 376.
Bayley, Kümmel, and Salisbury 1914 A, 13.
Eastman, C. R. 1905 B, 79.
1911 A, 29.
Hussakof, L. 1908 A, 100.
Lull, R. S. 1917 D, 110.
Lyman, B. S. 1894 A, 214 (Ischypterus).
Triassic (Newark); New Jersey.

Semionotus tenuiceps (Agassiz).

Hay, O. P. 1902 A, 376.
Bayley, Kümmel, and Salisbury 1914 A, 13.
Bronn, H. G. 1849 A, 658 (Eurynotus).
Eastman, C. R. 1905 B, 86.
1911 A, 29, 63, 66.

Eaton, G. F. 1903 A, 265.
Hobbs, W. H. 1901 A, 56.
Hussakof, L. 1908 A, 101.
Lull, R. S. 1917 D, 110.
Lyman, B. S. 1894 A, 205, 209, 214 (Ischypterus); 210 (Ischypterus latus, I. tenuiceps).
Newberry, J. S. 1888 A, 32, pl. v, figs. 1-3; pl. vii, fig. 3; 46, pl. xiii, fig. 3 (Ischypterus latus).
Redfield, J. H. 1888 A, 46 (Palæoniscus).
Shellwien, E. 1901 A, 29 (Ischypterus).
Triassic (Newark); Massachusetts, Connecticut, New Jersey.

Semionotus sp. indet.

Hitchcock, E. 1823 A, 76, pl. figs. 1, 2 ("ichthyolites"). Triassic (Newark); Massachusetts.
Loper, S. W. 1899 A, 98, fig. 2 ("fish"). Triassic (Newark); Connecticut.

TETRAGONOLEPIS Bronn. Type *T. semicincta* Bronn.

Bronn, H. G. 1830, Neues Jahrb. Min., 30.
Woodward, A. S. 1895 A, 158.
Zittel, K. A. 1890 A, 207.
Egerton, P. G. in Lyell, C. 1847 B, 277, pl. ix, fig. 2.
Newberry, J. S. 1888 A, 20 (This genus?).
Shaler and Woodworth 1899 A, 431 ("Tetragonolepis").
Triassic (Newark); Virginia.

Tetragonolepis? sp. indet.

Hay, O. P. 1902 A, 376 (Semionotus ovatus, in part).

ASPIDORHYNCHIDÆ Nicholson and Lydekker.

Nicholson and Lydekker 1889 A, 987.
Arldt, T. 1923 A, 494 ("aspidorhynchiden").
Assmann, P. 1906 A, 51, 76 (Rhynchodontidæ).
Bridge, T. W. 1904 A, 502.
Dean, Grudger, Henn 1923 A, 624.
Goodrich, E. S. 1909 A, 344.
Jordan, D. S. 1905 A, ii, 29.
1923 A, 115.
Nicholson and Lydekker 1889 A, 987 (Aspidorhynchidæ, Belonorhynchidæ).
Regan, C. T. 1909 B, 77 (Aspidorhynchii).
Reis, O. 1887 A, 155 ("aspidorhynchen").
Schlosser, M. 1917 A, 138, 139, 140, 148 ("aspidorhynchiden").
Stensiö, E. A. 1925 A, 14, 119 ("aspidorhynchids").
Vetter, B. 1881 A, 73 (Aspidorhynchi).
Woodward, A. S. 1895 A, 415.
1898 B, 111.
1912 A (1908), 142.
Zittel, K. A. 1890 A, 219 (Rhynchodontidæ).
Zittel and Broili 1911 A, 111.
Zittel, Eastman, etc. 1902 A, 88.
Zittel and Koken 1911 A, 111.
Zittel and Schlosser 1923 A, 112.

BELONOSTOMUS Agassiz. Type *B. tenuirostris* Agassiz.

Agassiz, L. 1834, Neues Jahrb. Min., 388.
1843 (1844), II, pt. 2, 140, 297.
Arldt, T. 1923 A, 494.
Assmann, P. 1906 A, 56.
Bridge, T. W. 1904 A, 502.
Costa, O. G. 1856, Ittiol. Foss., 13 (Ophirachis).
Dean, Gudger, Henn 1923 A, 624.
Eastman, C. R. 1917 A, 286.
Jordan, D. S. 1905 A, ii, 29.
1919 B, 180.
Nicholson and Lydekker 1889 A, 988.
Reis, O. 1887 A, 151, pls. i, ii.
Schlosser, M. 1917 A, 140.
Steinmann, G. 1927 A, 75.
Stromer, E. 1925 B, 349.
Vetter, B. 1881 A, 84-90.
Winckler, T. C. 1871 B, 173.
Woodward, A. S. 1888 K, 354.
1888 L, 145, pl. vii, figs. 7-13.
1895 A, 428.
1895 G, 210.
1896 E, 70.
1898 B, 112.
1912 A (1908), 142.
Zittel, K. A. 1890 A, 221.
Zittel and Eastman, etc. 1902 A, 89.
Zittel and Koken 1911 A, 112.
Zittel and Schlosser 1923 A, 113.

Belonostomus ornatus Felix.

Felix, J. 1891 A, 192, pl. xxviii, figs. 14-18; pl. xxx, figs. 8, 8*a*.
Woodward, A. S. 1895 A, 440.
Lower Cretaceous (Neocomian); Mexico.

LEPISOSTEIDÆ Adams.

Adams, A. 1854 A, 93.
Unless otherwise indicated the authors, as cited, employ the form Lepidosteidæ.
Hay, O. P. 1902 A, 376 (Lepisosteidæ).
Abel, O. 1919 A, 215.
Agassiz, L. 1832 A, 140 (Lepidostei).
1833 A, 475 (Sauroides).
Allis, E. P. 1909 A, 202.
Arldt, T. 1907 D, 662.
1912 A, 716, 762.
1923 A, 494 ("lepidosteiden").
Baird, S. F. 1876 A, 311 ("garfishes").
Bonaparte, C. L. 1840 A, 48.
Bridge, T. W. 1896 A, 540.
1904 A, 502.
Carus, V. 1875 A, 590 (Lepidosteini).
Cockerell, T. D. A. 1913 B, 121.
Collinge, W. E. 1894 A, 528.
Cunningham, J. T. 1912 A, 246.
Cuvier, G. 1825 A, v, 2, 307 ("lepisostées").
Dean, Gudger, Henn 1923 A, 624.

Duméril, A. M. C. 1870 A, 291 ("lepidostéidés").
Fitzinger, L. J. 1873 A, 52 (Lepidostei).
Fowler, H. W. 1911 A, 149 (Lepisosteidæ).
Gill, T. 1875 B, 252.
1885 B, 27.
Goodrich, E. S. 1908 A, 769.
1913 A, 80.
1909 A, 344 (Lepidosteus).
Gregory, W. K. 1923 A, 238, 240.
Hoernes, R. 1886 A, 556.
Huxley, T. H. 1862 A, liii.
Jaekel, O. 1911 A, 69 (Lepidostei).
Jordan, D. S. 1905 A, ii, 29, 578 (Lepisosteidæ).
1907 B, 259, 761 (Lepisosteidæ).
1923 A, 115 (Lepisosteidæ).
Jordan and Gilbert 1882 A, 89 (Lepidosteidæ).
Lemoine, V. 1889 A, 233 ("lépidostés").
Leunis and Ludwig 1883 A, 774.
Lönnberg, E. 1901 A.
Lütken, C. 1868 C.
1871 A, 286 ("lépidostéides").
Müller, J. 1846 A, 208 (Lepidosteini).
Rabl, C. 1901 A, 489 ("lepidosteiden").
Rauther, M. 1913 A, 1100.
Sauvage, H. E. 1897 A, 92 ("lépidostéidés").
Schlosser, M. 1917 A, 144 ("lepidosteiden").
Sewertzoff, A. N. 1923 B.
Shepherd, C. E. 1914 A, 262.
Terra, P. 1911 A, 205.
Wallace, A. R. 1876 A, ii, 459.
Watson, D. M. S. 1925 A, 866, 867 ("lepidosteoids").
Woodward, A. S. 1898 B, 112.
Zittel and Koken 1911 A, 112.
Zittel and Schlosser 1923 A, 113 (Lepidosteidæ).
Zittel and Woodward 1902 A, 89.

LEPISOSTEUS Lacépéde. Type *L. gavialis* Lacépéde=*Esox osseus* Linn.

Unless otherwise indicated the authors, as quoted, employ the name *Lepidosteus.*

Hay, O. P. 1902 A, 376 (Lepisosteus).
Abel, O. 1912 F, 429, 513.
1919 A, 43, 216, figs. 17, 25.
1920 A, 337, figs. 535, 536.
Adams, L. A. 1919 A, 71, pl. ii.
Agassiz, A. 1877 A, 117, fig. 1.
Agassiz, L. 1832 A, 140.
1835 D, 189.
1835 E, 199.
1835 F, 253.
1835 J, 119.
1844 C, 268.
1856 C, 63.
Allis, E. P. 1897 A, 10.
1898 A, 430.
1898 B, 93.
1905 A, 407.
1909 A, 214.
1915 A, 566.
1918 A, 242.
1918 B, 260.
1919 A, 368.
1919 C, 245.
1919 E, 369.
1922 B.
1922 C, 11.
1923 A, 41, 44.
1926 A, 169.
Arldt, T. 1907 D, 97, 284 (Lepisosteus).
1923 A, 494 (Lepidosteus, Clastes, Pneumatosteus).
Assmann, P. 1906 A, 78.
Baird, S. F. 1876 A, 347.
Baraldi, G. 1877 A, 12.
Baudelot, E. 1873 A, 94, 122.
Baur, G. 1893 D, 117.
Beer, G. R. 1926 A, 283, figs. 111, 115, 120.
Bliss, R. 1875 A, 386.
Boas, J. E. V. 1914 B, 543.
Brandt, J. F. 1865 A, 7.
Bridge, T. W. 1878 A, 688.
1896 A, 540, pl. xxi.
1904 A, 503, 744.
Bronn, H. G. 1848 A, 632, 634.
Cockerell, T. D. A. 1913 B, 121 (Lepisosteus).
Collinge, W. E. 1893 B, 259.
1893 C, 263.
1895 C, 888.
Connell, A. 1835 B, 191.
Cope, E. D. 1880 U, 148 (Clastes).
Coulon, L. 1903 A, 143.
Credner, H. 1893 A, 669.
Cunningham, J. T. 1912 A, 236, 258, pl. xx.
Cuvier, G. 1815 A, 117 ("lépisostées").
Day, H. 1915 A, 431.
Dean, B. 1895 C, 734.
1896 D, 338.
Dean, Gudger, Henn 1923 A, 687.
Deecke, W. 1913 A, 71.
Derjugin, K. M. 1909 A.
1910 A, 629.
Dollo, L. 1892 D, 120.
1893 E, 193.
Duméril, A. M. C. 1856 A, 434 ("lépisostée).
1870 A, 291; pls. xxi, xxii, xxiv (Lepisosteus).
Eastman, C. R. 1911 A, 18.
1917 A, 282.
Edgeworth, F. H. 1925 A, 234, 240 (Lepidosteus).
1926 A, 181, fig. 18 (Lepidosteus).
Egerton, P. G. 1852 C, 6L, 2.
Fowler, H. W. 1911 A, 150 (Lepisosteus).
Gadow, H. 1896 A, 7.
Gaupp, E. 1902 A, 218.
1905 D, 900.
1906 B.
1908 C, 704.
1910 C, 338.
1912 B, 227.
Gegenbaur, C. 1867 A, 56.
1867 B, 358-420, pls. vii-ix.
Gilmore, C. W. 1917 B, 4 (Lepisosteus).
Goetsch, W. 1920 A, 13, 17, 515.
Goodrich, E. S. 1904 A, 477, fig. 2.
1908 A, 757, 758.
1909 A, 512, figs.
1913 A, 81.
Green, J. 1858 A, 363.
Gregory, W. K. 1915 D, 327.

Gregory, W. K. 1920 A, 222.
1922 A, 9, 79.
Hague, F. 1924 A, 274.
Hase, A. 1907 A.
Hasse, C. 1893 C, 94, pl. vi, fig. 13.
Hasse and Schwarck 1870 A, 30.
Hatschek, B. 1889 B, 115, fig. 3.
Heckel, J. J. 1850 A, 365.
1850 B, 145.
1851 A, 222.
Heilprin, A. 1887 A, 68.
Hertwig, O. 1879 A, lxxx.
Hilgard, T. C. 1860 A, 679 ("gars").
Hubbs, C. L. 1919 B, 63.
Huxley, T. H. 1858 D, 517.
1859 H, 45.
1862 A, xlix.
1863 F, 427.
1883 B, 569.
Imms, A. D. 1904 A, 30.
Jordan, D. S. 1905 A, ii, 23, 578 (Lepisosteus).
1907 B, 260 (Lepisosteus).
Jordan and Evermann 1917 A, 66 (Lepisosteus).
Jordan and Gilbert 1882 A, 90 (Lepidosteus).
Kehrer, F. A. 1896 A, 350.
Kesteven, H. L. 1922 A, 312.
Kiaer, J. 1924 A, 95.
Kindred, J. E. 1919 A.
Kingsley, J. S. 1925 A, 33, 103, 104, figs. 36, 111, 112.
Klaatsch, H. 1890 A, 124, 125, pl. vii.
1893 C, 181.
Kner, R. 1860 B, 819.
Köstlin, O. 1844 A.
Kryzanovsky, S. 1916 A, 237.
Lakjer, T. 1927 A.
Lavocat, A. 1885 A, 32 ("lépidostée").
Lebedinsky, N. G. 1917 A, 315 (Lepidosteus).
Lee, J. E. 1860 A, 458, pl. xii.
Leriche, M. 1900 A, 187.
1902 A, 12.
1906 C, 417.
Leunis and Ludwig 1883 A, 774.
Lönnberg, E. 1901 A.
1902 A.
Lucas, F. A. 1901 J, 57 ("gar pike").
Luther, A. 1913 B, 13, 26, 58.
Lütken, C. 1868 C.
Mantell, G. A. 1844 A, 651.
Matthes, E. 1921 A, 221.
Matthew, W. D. 1915 A, 298.
Mayhew, R. L. 1924 A, 315.
Meek, A. 1916 A, 52.
Miall, L. C. 1872 A, 25, 31.
Müller, J. 1845 A.
Nopcsa, F. 1923 C, 474.
Norman, E. W. 1926 A.
Osburn, R. C. 1906 B, 587.
Owen, R. 1848 B, 49.
1868 A, 888.
Peale, A. C. 1876 A, 154 (Clastes).
Pehrson, T. 1922 A.
Plate, L. 1926 A, 44.
Pompeckj, J. F. 1913 A, 1145.
Priem, F. 1901 A, 490 (Lepidosteus); 491 (Clastes).
1908 B, 81, 90.
Rauther, M. 1913 A, 1071, fig. 26.
Regan, C. T. 1923 B, 445, 455.
Reis, O. 1887 A, 151 (Lepidosteus).
Reynolds, S. H. 1897 A, 545.
Ridewood, W. G. 1896 A, 381.
1904 A, 56.
1905 C, 279.
Rogers, A. F. 1924 A, 546.
Romer, A. S. 1924 A, 123, 128, figs. 2, 3, 6, 7, 9.
Rosén, N. 1916 A, 21, fig. 10.
Ryder, J. 1885 E, 95.
Sagemehl, M. 1883 A.
1884 A, 19.
Salensky, W. 1899 B, 317.
Sauvage, H. E. 1897 A, 92 (Lepidosteus, Clastes).
Scharff, R. F. 1911 A, 163, 198, 290.
1922 A, 68.
Schauinsland, H. 1906 A, 438, 449, figs. 251-254.
Schlesinger, G. 1909 A (144).
Schlosser, M. 1901 N, 480.
1917 A, 142.
Schmalhausen, J. J. 1912 A, 539, 568, pls. xvi-xviii.
1913 A, 3.
1913 C, pls. ii, iii.
1923 B, 546, fig. 1.
Schreiner, K. E. 1902 A, 467 (Lepisosteus).
Scupin, H. 1896 A, 166.
Sewertzoff, A. 1896 A, 239, fig. 2.
1918 A, 207.
1923 B.
1924 A, 578.
1925 A, 274.
1926 A, 523.
1926 D, 77.
1926 E, 555.
Solger, B. 1880 A, 368.
Stadtmüller, F. 1926 A, 160, fig. 6.
Stanton and Hatcher 1905 A, 38 (Lepidotus).
Starks, E. C. 1916 A, 12.
Steinmann, G. 1912 B, 726.
Stensiö, E. A. 1921 A, 138, 275.
1925 A, 14, 24, 31.
1925 B, 106.
Stephan, P. 1900 A, 287.
Strecker, C. 1887 A, 302.
Stromer, E. 1925 B, 360 (Lepidosteus).
Sushkin, P. P. 1910 A, 252.
1927 A, 264.
Sutton, J. B. 1884 A, 570.
Taylor, H. F. 1916 A, 298.
Terra, P. 1911 A, 96, fig. 24.
Tims, H. W. 1905 A, 45.
Tomes, C. S. 1877 A, 46.
1878 A, 38, pl. iv.
1898 C, 347.
Traquair, R. H. 1880 A, 157.
1900 C, 508.
Uhlmann, E. 1921 A, 302.
Ussow, S. 1900 A.
Van Wijhe, J. W. 1922 A, 293 (Lepidosteus)
Veit, O. 1911 A.
Wagner, R. 1843 A.
Wallace, A. R. 1876 A, ii, 459.
Wamich, P. 1913 A, 21.
Watson, D. M. S. 1912 A, 5.
1925 A, 851.

White, C. A. 1885 A, 64.
Wiedersheim, R. 1880 C, 128.
Wilder, B. 1843 B, 131.
1876 A, 153, 166, pl. i.
Woodward, A. S. 1898 B, 113.
Woodward, H. 1878 A, 19.
1906 C, 279.
Wyman, J. 1843 B, 131.
Zittel and Schlosser 1923 A, 113, figs. 7, 196.
Zittel and Koken 1911 A, 113, figs. 6, 208.
Zittel and Woodward 1902 A, 89.

Lepisosteus aganus (Cope).

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus).
Merrill, G. P. 1907 A, 7 (Clastes).
Stromer, E. 1925 B, 361.
Eocene (Wasatch); New Mexico.

Lepisosteus atrox Leidy.

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus).
Hussakof, L. 1908 A, 78.
Hussakof and Bryant 1919 A, 195.
Jordan, D. S. 1905 A, ii, 32.
Merrill, G. P. 1907 A, 7 (Clastes anax, atrox); 12 (L. atrox).
Sauvage, H. E. 1901 G, 80 (Lepidosteus).
Schlosser, M. 1901 N, 480 (Lepidosteus).
Stromer, E. 1925 B, 360.
Eocene (Bridger); Wyoming.

Lepisosteus cuneatus (Cope).

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1909 B, 796.
Hussakof, L. 1908 A, 78.
Hussakof and Bryant 1919 A, 195.
Stromer, E. 1925 B, 360.
Eocene (Manti); Utah.

Lepisosteus cycliferus (Cope).

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus).
Merrill, G. P. 1907 A, 8 (Clastes).
Eocene (Wasatch); Wyoming.

Lepisosteus glaber Marsh.

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus).
Cope, E. D. 1874 B, 441.
Eocene (Bridger); Wyoming.

Lepisosteus integer (Cope).

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus).
Loomis, F. B. 1907 B, 358 (Lepidosteus).
Merrill, G. P. 1907 A, 8 (Clastes).
Stromer, E. 1925 B, 361 (Lepidosteus).
Eocene (Wasatch); New Mexico.

Lepisosteus knieskerni Fowler.

Fowler, H. W. 1911 A, 150, fig. 92. Cretaceous??; New Jersey.

Lepisosteus longus Lambe.

Lambe, L. M. 1908 A, 9, 13, pl. i, figs. 7-9 (Lepidosteus). Oligocene (Cypress Hills); Saskatchewan.

Lepisosteus nahunticus (Cope).

Hay, O. P. 1902 A, 377.
Hussakof, L. 1908 A, 79, fig. 41.
Miocene; North Carolina.

Lepisosteus notabilis Leidy.

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 A, 163 (Lepidosteus).
Leidy, J. 1873 B, 192, 349, pl. xxxii, figs. 12, 13.
Eocene (Bridger); Wyoming.

Lepisosteus occidentalis Leidy.

Hay, O. P. 1902 A, 377.
Bowen, C. F. 1915 A, 118, 148-151 (L. occidentalis, L. Haydeni).
Brown, B. 1907 A, 842.
1914 E, 358, 378.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus occidentalis, L. haydeni).
Cross, W. 1896 A, 227.
Gilmore, C. W. 1924 D, 27.
Hatcher, J. B. 1905 B, 67 (Lepidotus occidentalis); 68 (Lepidotus haydeni).
Hay, O. P. 1903 D, 119.
1910 B, 296.
Lambe, L. M. 1902 A, 29, pl. xix, fig. 3.
1904 C, 21, 36, 43 (Lepidosteus).
1907 B, 179 (Lepidotus).
Matthew, W. D. 1916 A, 485.
Osborn, H. F. 1902 I, 11 (Lepidotus).
Peale, A. C. 1912 A, 746, 754 (Lepidotus).
Sternberg, C. M. 1924 A, 68 (Lepisosteus).
Stromer, E. 1925 B, 360.
Williston, S. W. 1902 K, 953.
Cretaceous (Judith River); Montana: (Hell Creek); Montana: (Belly River); Alberta: (Lance); Wyoming, Saskatchewan: (Arapahoe or Denver); Colorado.

Lepisosteus osseus (Linn.).

Unless otherwise indicated, the authors, as cited, spell this name *Lepidosteus.*
Hay, O. P. 1902 A, 377 (Lepisosteus).
Abel, O. 1912 F, 429, fig. 305.
1919 A, 52, fig. 25.
Agassiz, L. 1835 B, 338.
Allis, E. P. 1919 C, 249.
Beer, G. R. 1926 A, 284, figs. 25-33.
Cockerell, T. D. A. 1908 C, 163.
Collinge, W. E. 1893 C, 263, pls. iv-ix.
Cuvier, G. 1814 A, 76 (Esox).
Goetsch, W. 1920 A, 14, 516, pl. i (Lepisosteus).
Goodrich, E. S. 1901 A, 319, fig. 1.
1909 A, 512, figs.
Hay, O. P. 1923 A, 363, 366 (Lepisosteus).
Hertwig, O. 1874 B, pl. i, figs. 1, 2 (Lepisosteus).
Jackson, C. T. 1854 B, 92 ("gar-pike").
Jordan and Evermann 1896 A, 109 (Lepisosteus).
Jordan and Gilbert 1882 A, 91.
Klaatsch, H. 1890 A, 125, 200, pl. vii.
Köstlin, O. 1844 A, 332 (Lepisosteus).
Luther, A. 1913 B, 27, pl. i, text-figs. 12, 13, 28 (Lepisosteus).
Mayhew, R. L. 1924 A, 315.
Norman, E. W. 1926 A, 437, fig. 50.

Regan, C. T. 1923 B, 445 (Lepisosteus).
Scupin, H. 1896 A, 166 (Lepisosteus).
Sewertzoff, A. N. 1925 A, 273, fig. 3.
1926 D, 78, fig. 1.
Shepherd, C. E. 1910 B, 296, pl. ii, fig. 6.
1914 A, 262.
Stephan, P. 1900 A, 355, fig. 3 (Lepisosteus).
Veit, O. 1907 A, 157, figs. 1-12.
1911 A, 93-225, pls. A-C.
Recent; Mississippi Valley: Pleistocene; South Carolina.

Lepisosteus platostomus Rafinesque.

Rafinesque, C. S. 1820, Icth. Ohiensis, 72.
Hay, O. P. 1917 E, 43.
1923 A, 382.
Jordan and Evermann 1896 A, 110.
Mayhew, R. L. 1924 A, 315, pls. i-iv (Lepidosteus).
Parker and Haswell 1897 A, 203, fig. 826.
Regan, C. T. 1923 B, 445, figs. 2-5 (Lepidosteus).
Recent; Great Lakes to the Gulf and southwestern Texas: Pleistocene (Middle?); Florida.

Lepisosteus simplex Leidy.

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus).
1909 B, 796.
Hussakof and Bryant 1919 A, 195, pl. lxviii.
Merrill, G. P. 1907 A, 12.
Sauvage, H. E. 1901 G, 81 (Lepidosteus).
Schlosser, M. 1901 N, 480 (Lepidosteus).
Stromer, E. 1925 B, 360.
Eocene (Bridger); Wyoming.

Lepisosteus whitneyi Marsh.

Hay, O. P. 1902 A, 377.
Cockerell, T. D. A. 1908 C, 163 (Lepidosteus).
Eocene (Bridger); Wyoming.

Lepisosteus sp. indet.

Gidley, J. W. 1915 E, 539 (This genus?). Upper Cretaceous (Fort Union); Montana.
1927 E, 274. Pleistocene; Florida.
Gilmore, C. W. 1916 D, 302, pl. lxxvii, fig. 5. Upper Cretaceous; New Mexico.
1920 A, 8, 68. Upper Cretaceous (Kirtland); New Mexico.
1926 J, 28. Upper Cretaceous (Lance); Wyoming.
Hay, O. P. 1903 D, 120.
1927 D, 274. Pleistocene; Florida.
Merrill, G. P. 1907 A, 7 (Clastes); 12 (Lepisosteus).
Reeside, J. B. 1924 A, 21. Upper Cretaceous (Fruitland); 23 (McDermott); p. 31 (Ojo Alama); 38, 42 (Nacimiento); New Mexico.
Sinclair and Granger 1914 A, 303. Eocene; New Mexico.

Atractosteus Rafinesque. Type *Lepisosteus (A.) ferox Raf.* (= *A. tristœchus*).

Rafinesque, C. S. 1820, Ichth. Ohien., 75.
Gregory, W. K. 1920 A, 112, fig. 4 (Lepidosteus).
Jordan and Evermann 1896 A, 109, 111.
Regan, C. T. 1923 B, 445, fig. 1 (Lepidosteus).

Atractosteus emmonsi sp. nov.

Emmons, E. 1858 B, 244, fig. 98 ("ganoid").
Miocene?; North Carolina.

Atractosteus lapidosus Hay.

Hay, O. P. 1919 C, 110-111, pl. xxvi, fig. 4; pl. xxviii, fig. 8.
Hay, O. P. 1923 A, 375.
Pleistocene; Florida.

Atractosteus tristœchus (Bloch and Schneider).

Bloch and Schneider 1801, Syst. Ichth., 395 (Esox).
Girard, C. F. 1858 Pacif. R. R. Explor., 353 [Lepidosteus (Atractosteus) berlandieri].
Günther, A. C. 1870 A, 329 (Lepidosteus viridis).
Hay, O. P. 1926 C, 1 (This species?).
Jordan and Evermann 1896 A, 111 (Lepisosteus).
1900 A, 3235, pl. xxii, fig. 50 (Lepisosteus).
Jordan and Gilbert 1882 A, 92 (Litholepis).
Rafinesque, C. S. 1820, Ichth. Ohien., 73 [Lepisosteus (Atractosteus) ferox].
Recent; Southern States, Cuba, Mexico: Pleistocene (Early); Texas.

Suborder Amiiformes, new name.

Hay, O. P. 1902 A, 378 (Halecomorphi).
Allis, E. P. 1909 A, 201 (Halecomorphi).
Arldt, T. 1907 D, 282 (Cyclolepidoti).
Beer, G. R. 1926 A, 289 (Halecomorphi).
Cockerell, T. D. A. 1913 B, 122 (Halecomorphi).
Cope, E. D. 1871 T, 452, 453 (Halecomorphi).
1891 N, 22 (Halecomorphi).
Coulon, L. 1903 A, 149 ("amioides").
Eastman, C. R. 1908 A, 63 (Protospondyli).
1904 A, 494 (Protospondyli).
1909 A, 327 (Amioidei).
Goodrich, E. S. 1913 A, 80 (Amioidei).
Gorjanovič-Kramberger, K. 1905 A, 195 (Protospondyli).
Gregory, W. K. 1907 D, 448, 466 (Halecomorphi).
1923 A, 238, 240 (Amioidea).
Huxley, T. H. 1861 D, 442, 448 (Amiadæ).
Jaekel, O. 1911 A, 84 (Amii).
Jordan, D. S. 1905 A, ii, 33, 574 (Halecomorphi).
1907 B, 261, 761 (Halecomorphi).
1923 A, 115 (Halecomorphi).
Jordan and Gilbert 1882 A, 92 (Halecomorphi).
Kingsley, J. S. 1885 A, 97 (Halecomorphi).
Oswald, F. 1909 A, 126 (Amioidea).
Pompeckj, J. F. 1913 A, 1144 (Amioidei).
Regan, C. T. 1909 B, 76 (Amioidei, Pachycormoidei).

Schlosser, M. 1917 A, 136, 148 (Halecomorphi).
Stromer, E. 1912 A, 31 (Amioidei).
1925 B, 361, 365 (Amioidei).
Zittel and Koken 1911 A, 113 (Amioidei).
Zittel and Schlosser 1923 A, 113 (Amioidei).
Zittel and Woodward 1902 A, 89 (Amioidei)

FURIDÆ Jordan.

Jordan, D. S. 1923 A, 116.
Unless otherwise indicated, the authors, as cited, use for this family the name Eugnathidæ.
Hay, O. P. 1902 A, 378 (Isopholidæ).
Arldt, T. 1923 A, 495.
Boulenger, G. A. 1904 D, 498.
Bridge, T. W. 1904 A, 498.
Cunningham, J. T. 1912 A, 258.
Eastman, C. R. 1905 B, 100.
1911 A, 29, 73.
Goodrich, E. S. 1904 A, 495.
Goodrich, E. S. 1909 A, 390.
Gregory, W. K. 1923 A, 238.
Jordan, D. S. 1905 A, ii, 26 (Isopholidæ).
Pompeckj, J. F. 1913 A, 1144.
Priem, F. 1908 B, 15 ("eugnathidés").
Regan, C. T. 1923 B, 457, 460.
Stolley, E. 1920 A, 77.
Swinnerton, H. H. 1925 A, 98 (Eugnathidæ).
Woodward, A. S. 1906 C, 279 (Eugnathus).
Zittel and Koken 1911 A, 114 (Caturidæ).
Zittel and Schlosser 1923 A, 116 (Caturidæ).
Zittel and Woodward 1902 A, 83.

OTOMITLA Felix. Type *O. speciosa* Felix.

Felix, J. 1891 A, 189.
Woodward, A. S. 1896 E, 70.
1898 B, 108.

Otomitla speciosa Felix.

Felix, J. 1891 A, 189, pl. xxix, fig. 3; pl. xxx, figs. 3-5.
Woodward, A. S. 1895 A, 358.
Cretaceous (Neocomian); Mexico.

PTYCHOLEPIS Agassiz. Type *P. bollensis* Agassiz.

Agassiz, L. 1832 A, 142.
Hay, O. P. 1902 A, 378.
Agassiz, L. 1832 A, 142.
1833 A, 476.
1835 H, 219.
Alessandri, G. 1910 A, 123.
Bronn, H. G. 1849 A, 663.
Deecke, W. 1913 A, 74.
1926 A, 193.
Eastman, C. R. 1905 B, 100.
1911 A, 21, 29, 73.
Egerton, P. G. 1852 C, 6 H, i, pl. vii.
1855 A, 8 I, i, pl. viii.
Hennig, E. 1919 B, 173, pl. iii, text-fig.
Jordan and Evermann 1917 A, 140.
Koken, E. 1893 B, 278.
Priem, F. 1908 B, 16.
Scupin, H. 1896 A, 169, pl. x, fig. 5.
Zittel and Koken 1911 A, 116.
Zittel and Schlosser 1923 A, 118.
Zittel and Woodward 1902 A, 84.

Ptycholepis marshi Newberry.

Newberry, J. S. 1878 B, 127.
Hay, O. P. 1902 A, 378 (P. marshii).
Eastman, C. R. 1905 B, 100.
1911 A, 29, 73, pls. vii, viii.
Hussakof, L. 1908 A, 95, pl. vi.
Loper, S. W. 1899 A, 98 (P. marshii).
Lull, R. S. 1917 D, 110.
Lyman, B. S. 1894 A, 209 (P. marshii).
Moodie, R. L. 1918 B, 390.
1923 B, 329.
Triassic (Newark); Connecticut.

MACROSEMIIDÆ Cope.

Hay, O. P. 1902 A, 378.
Abel, O. 1919 A, 204.
Arldt, T. 1923 A, 495 ("macrosemiden").
Goodrich, E. S. 1904 A, 495.
1908 A, 769.
1909 A, 336.
Gregory, W. K. 1907 D, 448.
1923 A, 238, 240.
Jordan, D. S. 1905 A, ii, 26, 580.
1907 B, 761.
1923 A, 115.
Regan, C. T. 1923 B, 455, 460.
Schlosser, M. 1917 A, 138, 140, 147 ("macrosemiiden").
Steinmann, G. 1927 A, 75 (Macrosemidæ).
Traquair, R. H. 1911 A, 29.
Watson, D. M. S. 1925 A, 866 ("macrosemiids").
Woodward, A. S. 1906 C, 279.
Zittel and Koken 1911 A, 109.
Zittel and Schlosser 1923 A, 110.
Zittel and Woodward 1902 A, 84.

MACREPISTIUS Cope. Type *M. arenatus* Cope.

Hay, O. P. 1902 A, 378.
Zittel and Woodward 1902 A, 84.

Macrepistius arenatus Cope.

Hay, O. P. 1902 A, 378.
Hill, R. T. 1901 A, 159, pl. xxiv.
Hussakof, L. 1908 A, 81.
Jordan, D. S. 1905 A, ii, 26.
Lower Cretaceous (Glen Rose); Texas.

PACHYCORMIDÆ Woodward.

Hay, O. P. 1902 A, 378.
Arldt, T. 1923 A, 495 ("pachycormiden").
Bridge, T. W. 1904 A, 501.
Dean, Gudger, Henn 1923 A, 624.
Dollo, L. 1892 F, 182 (Protosphyraenidæ).
Goodrich, E. S. 1908 A, 769.
1909 A, 331.
Gregory, W. K. 1923 A, 238.
Gudger, E. W. 1918 A, 100 (Protosphyrænidæ).
Hennig, E. 1920 B, 113.
Jordan, D. S. 1905 A, ii, 34 (Pachycormidæ Protosphyrænidæ).
1907 B, 761 (Pachycormidæ, Protosphyrænidæ).
Jordan, D. S. 1923 A, 115.
Regan, C. T. 1923 B, 445.
Schlosser, M. 1917 A, 136, 138 ("pachycormiden"); 142 ("protosphyræniden").
Steinmann, G. 1927 A, 77.
Stromer, E. 1925 B, 361 (Protosphyrænidæ).
Woodward, A. S. 1898 B, 109.
1922 C, 93.
Zittel and Koken 1911 A, 113.
Zittel and Schlosser 1923 A, 114 (Pachycormidæ); 115 (Protosphyrænidæ).
Zittel and Woodward 1902 A, 90.

PROTOSPHYRÆNA Leidy. Type *P. ferox* Leidy.

Hay, O. P. 1902 A, 379.
Andreae, A. 1901 A, 308.
1904 A, 309.
Arldt, T. 1923 A, 495 (Protosphyræna); 510 (Pelecopterus).
Bayer, F. 1908 A, 3 (Erisichte).
1909 A, 103.
Cockerell, T. D. A. 1919 A, 172.
Cope, E. D. 1880 U, 146 (Erisichthe).
Dean, Gudger, Henn 1923 A, 624.
Dollo, L. 1892 F, 182.
Eastman, C. R. 1901 B, 111.
1917 A, 298.
Fossa-Mancini, E. 1921 A, 196 (Pelecopterus).
Gregory, W. K. 1923 A, 241.
Gudger, E. W. 1918 A, 100.
Hay, O. P. 1902 F, 470.
1903 A, 2, 13, text-fig. 6.
Hennig, E. 1912 A, 489.
Jordan, D. S. 1905 A, ii, 34.
Lydekker, R. 1910 F, 673.
McClung, C. E. 1908 B, 244, pl. xiii; text-figs. 9, 10.
Mudge, B. F. 1875 A, 122 ("new genus").
Pompeckj, J. F. 1913 A, 1144.
Priem, F. 1896 B, 18.
1908 B, 49, fig. 19.
Rogers, A. F. 1924 A, 545.
Schlosser, M. 1917 A, 140, 141.
Sternberg, C. H. 1907 C, 123.
1917 A, 177 ("snout fish").
Storms, R. 1891 A, 154.
Stromer, E. 1924 B, 349, 361.
Woodward, A. S. 1895 G, 211, pl. viii and text-figs. 1-4.
1912 A (1908), 145.
1912 C, 329, pl. xix.
Zittel and Koken 1911 A, 130.
Zittel and Schlosser 1923 A, 116, fig. 202.
Zittel and Woodward 1902 A, 91.

Protosphyræna angulata Cope.

Hay, O. P. 1902 A, 379.
Hussakof, L. 1908 A, 92, fig. 47 (This genus?).
Cretaceous; North Carolina.

Protosphyræna bentoniana Stewart.

Hay, O. P. 1902 A, 379.
Cockerell, T. D. A. 1919 A, 171.
Upper Cretaceous (Benton); Kansas.

Protosphyræna chirurgus (Cope).

Hay, O. P. 1902 A, 379.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna dimidiata (Cope).

Hay, O. P. 1902 A, 379.
1903 A, 16, text-figs. 8-10, 11?, 12?.
Hussakof, L. 1908 A, 92.
Cretaceous (Niobrara); Kansas.

Protosphyræna gigas Stewart.

Hay, O. P. 1902 A, 379.
Schlosser, M. 1901 L, 479.
Upper Cretaceous (Pierre); Kansas.

Protosphyræna gladius (Cope).

Hay, O. P. 1902 A, 379.
1903 A, 24.
Hussakof, L. 1908 A, 93.
Cretaceous (Niobrara); Kansas.

Protosphyræna nitida (Cope).

Hay, O. P. 1902 A, 379.
Bayer, F. 1909 A, 103.
Gudger, E. W. 1918 A, 100, pl. vii, fig. 25.
Hay, O. P. 1903 A, 3, text-figs. 1-3.
Hussakof, L. 1908 A, 93, fig. 48b.
Zittel and Schlosser 1923 A, 115, fig. 201.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna obliquidens Loomis.

Hay, O. P. 1902 A, 379.
1903 A, 7.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna occidentalis Stewart.

Hay, O. P. 1902 A, 380.
Andreae, A. 1904 A, 309 (Ichthyodectes).
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna penetrans (Cope).

Hay, O. P. 1902 A, 379.
Bayer, F. 1909 A, 103.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna perniciosa (Cope).

Hay, O. P. 1902 A, 379.
1903 A, 9, pl. i, fig. 1; text-figs. 4, 5, 7.
Hussakof, L. 1908 A, 94.
Woodward, A. S. 1912 A, (1908), 146, 150, text-fig. 43.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna recurvirostris Stewart.

Hay, O. P. 1902 A, 379.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna sequax Hay.

Hay, O. P. 1903 A, 20.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna tenuis Loomis.

Hay, O. P. 1902 A, 379.
1903 A, 14, pl. i, figs. 2, 3.
Hussakof, L. 1908 A, 94.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna ziphioides (Cope).

Hay, O. P. 1902 A, 379.
1903 A, 22, text-figs. 13, 14.
Hussakof, L. 1908 A, 95, fig. 48a.
Upper Cretaceous (Niobrara); Kansas.

Protosphyræna sp. indet.

Hill, R. T. 1901 A, 328. Lower Cretaceous (Eagle Ford); Texas.
Hussakof, L. 1908 A, 95. Upper Cretaceous (Niobrara); Kansas.
Sternberg, C. H. 1913 A, 48. Upper Cretaceous (Niobrara); Kansas.

AMIIDÆ Günther.

Günther, A. C. 1870 A, 324.
Hay, O. P. 1902 A, 380.
Abel, O. 1919 A, 212.
Arldt, T. 1907 D, 637.
1912 A, 716, 762.
1923 A, 495 ("amiiden").
Braus, H. 1901 B, 217, 282 ("amiaden").
Bridge, T. W. 1896 A, 537.
1904 A, 499, 730.
Cockerell, T. D. A. 1913 B, 122.
Collinge, W. E. 1894 A, 529.
1895 D, 83.
Cunningham, J. T. 1912 A, 246.
Cuvier, G. F. 1805 A ("amies").
Dean, Gudger, Henn 1923 A, 624, 649.
Duméril, A. 1870 A, 18, 398 ("amiadés").
Fitzinger, L. J. 1873 A, 51 (Amiæ).
Giebel, C. G. 1855 A, 111 (Amiadæ).
Gill, T. 1875 B, 252.
1885 B, 18.
Goodrich, E. S. 1908 A, 769.
1909 A, 333.
Gregory, W. K. 1923 A, 238, 240.
Hoernes, R. 1886 A, 557 (Amiadæ).
Jordan, D. S. 1905 A, ii, pp. 34, 556.
1907 B, 262 (Amiidæ); p. 761 (Amiatidæ).
Jordan, D. S. 1923 A, 116.
Jordan and Gilbert 1882 A, 92.
Kiaer, J. 1924 A, 95, 97, 125 (Amioidei).
Klaatsch, H. 1890 A, 178 ("amiaden").
1893 B, 667 ("amiaden").
Lambe, L. M. 1905 D, 370 A.
Lemoine, V. 1889 A, 233 ("amiadés").
Leriche, M. 1900 A, 183 (Amiadæ).
Leunis and Ludwig 1883 A, 775.
Lönnberg, E. 1901 A (Amiadæ).
Lütken, C. 1871 A, 293 ("amides").
Pompeckj, J. F. 1913 A, 1144.
Rabl, C. 1901 A, 489 ("amiaden").
Rauther, M. 1913 A, 1100.
Regan, C. T. 1923 B, 455.
Schlosser, M. 1917 A, 144 ("amiiden").
Scupin, H. 1896 A, 174, 184 (Amiadæ).
Sewertzoff, A. N. 1923 B.
Shepherd, C. E. 1914 A, 262 (Amidæ).
Stannius, H. 1854 A (Amiæ).
Stromer, E. 1925 B, 361.
Wallace, A. R. 1876 A, ii, 458.
Woodward, A. S. 1902 C, 83 ("amioids").
Zittel and Koken 1911 A, 116 (Megaluridæ).
Zittel and Schlosser 1923 A, 119 (Megaluridæ).
Zittel and Woodward 1902 A, 91.

AMIOPSIS Kner. Type *A. prisca* Kner.

Hay, O. P. 1902 A, 380.
Jordan, D. S. 1905 A, ii, 36.
Sauvage, H. E. 1900 B, 116.

Amiopsis? dartoni Eastman.

Hay, O. P. 1902 A, 380.
Gilmore, C. W. 1905 A, 80.
Hussakof, L. 1916 C, 348.
Sauvage, H. E. 1900 B, 116.
Jurassic (Basal); South Dakota.

AMIA Linnæus. Type *Amia calva* (Linn).

Hay, O. P. 1902 A, 380.
Abel, O. 1919 A, 37, 214, figs. 9, 10.
Adams, L. A. 1919 A, 69, pl. ii.
Allis, E. P. 1897 A, 1.
1898 A.
1898 B, 83.
1903 A, 660.
1903 B.
Allis, E. P. 1905 A, 401.
1907 A, 569.
1909 A, 213.
1914 A, 357.
1915 A.
1918 A, 241.
1918 B, 258.
1919 A, 353.

Allis, E. P. 1919 B, 73.
1919 C, 245.
1919 D, 219.
1919 E, 365, 366, 369.
1922 B.
1922 C, 13.
1923 A, 41, 46.
1923 B, 125, 163.
1925 A, 76.
1926 A, 169.
Arldt, T. 1907 D, 284.
1923 A, 495 (Amia, Protamia, Hypamia).
Baraldi, G. 1877 A, 12.
Beer, G. R. 1924 A, 26, figs. 8-14, 16.
1926 A, 289, 330, figs. 34-49, 107, 113, 131.
Boas, J. E. V. 1914 B, 543.
Braus, H. 1901 B, 217.
Bridge, T. W. 1878 A, 712.
1896 A, 537, pl. xxi.
1904 A, 500, 730.
Cockerell, T. D. A. 1908 A, 574.
1911 B, 865.
1913 B, 121, 122.
Cockrell and Moor 1910 A, 252.
Cunningham, J. T. 1912 A, 258, 309, 321, 495.
Cuvier, G. 1815 A, 109.
Day, H. 1915 A, 451.
Dean, B. 1895 C, 734.
1896 D, 338.
Dean, Gudger, Henn 1923 A, 668 (Amia).
Deecke, W. 1913 A, 71.
Derjugin, K. 1909 A.
1910 A, 629.
Dollo, L. 1893 D, 3.
Duméril, A. 1856 A, 490 ("amie").
1870 A, 398, 416.
Eastman, C. R. 1911 A, 18.
1917 A, 282.
Edgeworth, F. H. 1925 A, 240, figs. 26, 28.
1926 A, 18, figs. 14-17.
Egerton, P. G. 1852 C, 6 L, 2.
Eimer, G. H. T. 1901 A, 61.
Fitzinger, L. J. 1873 A, 51.
Frost, G. A. 1913 A, 221.
Gadow, H. 1896 A, 7, 22.
Gaupp, E. 1898 B, 820.
1901 B, 935.
1905 D, 900.
1906 B.
1911 A, 420.
Gegenbaur, C. 1867 B, 419, pl. viii, fig. 13; pl. ix, fig. 22.
Giebel, C. G. 1855 A, 111.
Goetsch, W. 1915 A, 435.
Goodrich, E. S. 1904 A, 477.
1908 A, 769.
1908 B, 546.
1909 A, 506, figs.
Green, J. 1862 A, 218.
Gregory, W. K. 1915 D, 326, fig. 4.
1922 A, 9.
Haller, B. 1906 A, 255.
Hase, A. 1907 A.
1913 A, 148, fig. 69.
Hasse, C. 1893 C, 94, pl. vi, figs. 14, 15.
Hasse and Schwarck 1870 A, 30.
Hatschek, B. 1889 B, 115.
Hay, O. P. 1897 A, 131.
Heckel, J. J. 1850 A, 365.
1850 B, 145.
1851 A, 219.
Heilprin, A. 1887 A, 68, 301.
Hilgard, T. C. 1860 A, 679.
Hubbs, C. L. 1919 B, 62.
Huxley, T. H. 1861 D, 456.
1863 F, 427.
1876 E, 121.
1883 B, 567, 570, fig. 2.
Hyrtl, C. J. 1862 A, 97.
Jordan, D. S. 1905 A, ii, 35, 556.
1907 B, 262.
1917 A, 23.
Jordan and Evermann 1917 A, 23, 91.
Jordan and Gilbert 1882 A, 94.
Kehrer, F. A. 1896 A, 350.
Kesteven, H. L. 1922 A, 312.
Kindred, J. E. 1919 A.
Kingsley, J. S. 1885 A, 97.
1925 A, 222, figs. 233, 249.
Klaatsch, H. 1890 A, 179.
1893 B, 667.
Kryzanovsky, S. 1916 A, 237.
Lakjer, T. 1927 A, figs. 68, 81, 105.
Leriche, M. 1900 A, 183.
1906 C, 411.
Leunis and Ludwig 1883 A, 775.
Locy, W. A. 1894 A, 179.
Lubosch, W. 1911 B, 741.
Luther, A. 1913 B, 22, 58.
Lütken, C. 1871 A, 293.
McMurrich, J. P. 1883 A, 627.
Matthes, E. 1921 A, 221.
Mayhew, R. L. 1924 A, 317.
Meek, A. 1916 A, 52.
Miall, L. C. 1872 A, 29, 30.
Moodie, R. L. 1908 G, 515, fig. 2.
Newton, E. T. 1899 C, 1, pl. i.
Norman, E. W. 1926 A.
Owen, R. 1866 A, 37, 108.
Parker and Bettany 1877 A, 85.
Pehrson, T. 1922 A, 1-63.
Priem, F. 1900 A, 842.
1901 A, 488, 502.
1908 B, 81, 90, 123, fig. 62.
1911 C, 34, figs. 40-42.
Rafinesque, C. S. 1815 A, 380 (Amiatus).
Regan, C. T. 1912 B, 839.
1923 B, 451, 455.
Reynolds, S. H. 1897 A, 532.
Ridewood, W. G. 1904 A, 56.
1921 A, 329, 335.
Romer, A. S. 1924 A, 123, 128, figs. 2, 3.
Scharff, R. F. 1911 A, 163.
Schauinsland, H. 1906 A, 437.
Schlosser, M. 1917 A, 140, 142.
Schmalhausen, J. J. 1912 A, 526, 560, pls. xv-xviii.
1913 A, 5, 16.
1923 B, 544.
Schreiner, K. E. 1902 A, 467.
Scupin, H. 1896 A, 175, pl. x, fig. 12.
Sewertzoff, A. 1896 A, 240.
1918 A, 207.
1923 B, fig. 3.

Sewertzoff, A. 1925 A, 274.
1926 A.
1926 C, 42.
1926 D, 78, figs. 2, 3.
Shepherd, C. E. 1910 B, 296.
Stadtmüller, F. 1926 A, 161, fig. 7.
Stannius, H. 1854 A.
Starks, E. C. 1904 A, 260.
1916 A, 13 (Amiatus).
Steinmann, G. 1912 B, 726.
Stensiö, E. A. 1921 A, 274.
1922 A, 1265.
1925 A, 22, 31.
1925 B, 106, 162.
Stephan, P. 1900 A, 293.
Swinnerton, H. W. 1905 A, 373.
Totton, A. K. 1914 A, 258.
Traquair, R. H. 1900 C, 508.
Uhlmann, E. 1921 A, 322.
Van Wijhe, J. W. 1922 A, 293.
Watson, D. M. S. 1925 A, 820, 824, 851, 860, 865, 867.
Wegner, R. N. 1922 A, 482, text-fig. 40.
White, C. A. 1885 A, 64.
Whitehouse, R. H. 1910 B, 595.
1910 C, 137.
1918 A, 136.
Wilder, B. 1876 A, 151, 166.
Williston, S. W. 1925 A, 98.
Woodward, A. S. 1902 C, 88.
1906 C, 279.
Zittel and Koken 1911 A, 117.
Zittel and Schlosser 1923 A, 119.
Zittel and Woodward 1902 A, 92.

Amia calva Linnæus.

Linnæus, C. 1766, Syst. Nat., ed. xii, 500.
Allis, E. P. 1897 A, 1.
1898 A, 425, pl. xxxiii.
1898 B, 85.
1905 A, 404.
Baker, F. C. 1920 A, 453.
Beer, G. R. 1924 C, 304, figs. 13-26.
1926 A, 289.
Cockerell, T. D. A. 1908 C, 163.
1910 F, 1.
1911 F, 369.
1913 B, 122, fig. 1.
Creaser, C. W. 1926 A, 18.
Dean, B. 1914 A, 60 ("bowfin").
Degener, L. M. 1924 A, 113, pls. i-viii; text-fig. 1.
Duméril, A. 1870 A, 421.
Franque, H. 1847 A, pl. i.
Gaupp, E. 1901 B, 935, fig. 1.
Goetsch, W. 1915 A, 452, pls. xviii, xix; text-fig. 3.
1920 A, 12, 14, 438, 515, pl. i.
Goodrich, E. S. 1901 A, 318, fig. H.
1904 A, 477.
Hague, F. 1924 A, 267, pls. i-iii.
Hay, O. P. 1912 D, 552 ("bowfin").
1917 E, 43 (Amiatus).
1923 A, 336, 382 (Amiatus).
Heronimus, C. 1911 A, 193, figs. 1-5.
Höfer, B. 1899 A, 106, 118.
Hyrtl, C. J. 1862 A, 97, pl. ii, fig. 3.
Kingsley, J. S. 1885 A, 97.
Meek, A. 1916 A, 52.
Newton, E. T. 1899 C, 4.
Norman, E. W. 1926 A, 409, figs. 43, 48, 50, 54.
Nusbaum, J. 1908 A, 514.
Parker and Haswell 1897 A, 204, fig. 826.
Pehrson, T. 1922 A, 1-63, figs. 1-20.
Priem, F. 1908 B, 81.
Regan, C. T. 1923 B, 451, figs. 6-8.
Romer and Fryxell 1928 A, 519.
Schauinsland, H. 1906 A, 436, figs. 235, 237-240, 242-250.
Schmalhausen, J. J. 1913 C, pls. i-vi.
Sewertzoff, A. N. 1925 A, 273, fig. 2.
1926 A, 531.
Shepherd, C. E. 1914 A, 262.
Stephan, P. 1900 A, 360.
Willey, A. 1920 A, 89.
Woodward, A. S. 1895 A, 369, figs. 37-39.
Zittel and Schlosser 1923 A, 119, figs. 22, 211, 212.

Recent; Great Lakes to Texas and Florida: Pleistocene (Middle?); Florida: (Late); Illinois.

Amia depressa Marsh.

Hay, O. P. 1902 A, 380.
Cockerell, T. D. A. 1908 C, 163.
Romer and Fryxell 1928 A, 526.

Middle Eocene (Bridger); Wyoming.

Amia dictyocephala Cope.

Hay, O. P. 1902 A, 380.
Cockerell, T. D. A. 1906 A, 163.
1908 C, 163.
Hussakof, L. 1906 A, 60, fig. 29.
Merrill, G. P. 1907 A, 6.
Romer and Fryxell 1928 A, 526.

Miocene (Florissant); Colorado.

Amia elegans (Leidy).

Hay, O. P. 1902 A, 381.
Cockerell, T. D. A. 1908 C, 163.
Romer and Fryxell 1928 A, 524 (Hypamia).

Middle Eocene (Bridger); Wyoming.

Amia exilis Lambe.

Lambe, L. M. 1908 A, 9, 12, pl. i, figs. 1-6.

Oligocene (Cypress Hills); Saskatchewan.

Amia gracilis Leidy.

Hay, O. P. 1902 A, 381.
Cockerell, T. D. A. 1908 C, 163.
Romer and Fryxell 1928 A, 527 (Protamia).

Middle Eocene (Bridger); Wyoming.

Amia macrospondyla Cope.

Hay, O. P. 1902 A, 381.
Lambe, L. M. 1904 C, 27, 38, 43.
1908 A, 9, 12.
Romer and Fryxell 1918 A, 527.

Oligocene (White River); Assiniboia.

Amia media Leidy.

Hay, O. P. 1902 A, 381.
Cockerell, T. D. A. 1908 C, 163.

Cope, E. D. 1884 O, 60, pl. iv, figs. 7-20 (Pappichthys).
Merrill, G. P. 1907 A, 6 [Amia (Protamia)]; 14 (Pappichthys).
Romer and Fryxell 1928 A, 527 (Protamia).
Middle Eocene (Bridger); Wyoming.

Amia newberriana Marsh.

Hay, O. P. 1902 A, 381.
Cockerell, T. D. A. 1908 C, 163.
Romer and Fryxell 1928 A, 526.
Middle Eocene (Bridger); Wyoming.

Amia scutata Cope.

Hay, O. P. 1902 A, 381.
Cockerell, T. D. A. 1908 C, 163.
Merrill, G. P. 1907 A, 6.
Romer and Fryxell 1928 A, 526.
Miocene (Florissant); Colorado.

Amia uintaënsis Leidy.

Hay, O. P. 1902 A, 381.
Cockerell, T. D. A. 1908 C, 163.
Middle Eocene (Bridger); Wyoming.

Amia whiteavesiana Cope.

Hay, O. P. 1902 A, 381.
Lambe, L. M. 1904 C, 27, 38, 43.
1908 A, 9, 12.
Romer and Fryxell 1928 A, 527 (A. whitaecesiana).
Oligocene (White River); Assiniboia.

PAPPICHTHYS Cope. Type *P. plicatus* Cope.

Hay, O. P. 1902 A, 381.
Arldt, T. 1923 A, 495.
Jordan, D. S. 1905 A, ii, 36.
Leriche, M. 1900 A, 185.
Newton, E. T. 1899 C, 1.
Priem, F. 1901 A, 488.
Romer and Fryxell 1928 A, 525 (Syn. of Protamia).
Schlosser, M. 1917 A, 144.
Seeley, H. G. 1886 A, 412.
Stromer, E. 1925 B, 361.
Zittel and Koken 1911 A, 117.
Zittel and Schlosser 1923 A, 120.

Pappichthys corsoni Cope.

Hay, O. P. 1902 A, 381.
Merrill, G. P. 1907 A, 14 (P. corsoni, P. symphysis).
Romer and Fryxell 1928 A, 527 (P. corsoni, P. symphysis).
Middle Eocene (Bridger); Wyoming.

Pappichthys lævis Cope.

Hay, O. P. 1902 A, 381.
Hussakof, L. 1908 A, 86.
Merrill, G. P. 1907 A, 14.
Romer and Fryxell 1918 A, 525.
Middle Eocene (Bridger); Wyoming.

Pappichthys plicatus Cope.

Hay, O. P. 1902 A, 381.
Hussakof, L. 1908 A, 86.
Merrill, G. P. 1907 A, 14.
Peterson, O. A. 1919 A, 41 (This species?).
Middle Eocene (Bridger); Wyoming: Upper Eocene (Uinta); Utah.

Pappichthys sclerops Cope.

Hay, O. P. 1902 A, 381.
Merrill, G. P. 1907 A, 14.
Romer and Fryxell 1928 A, 525.
Middle Eocene (Bridger); Wyoming.

Pappichthys sp. indet.

Brown, B. 1907 A, 842. Upper Cretaceous (Hell Creek); Montana.
Gilmore, C. W. 1924 D, 27. Upper Cretaceous (Lance); Saskatchewan.
Hay, O. P. 1927 D, 266-268.
Lindgren and Drake 1904 A, 3 (This genus?).
Pleistocene (Idaho); Idaho.
Lucas, F. A. 1900 H, 99. Pleistocene? Idaho.
Merrill, G. P. 1907 A, 14. Eocene (Bridger); Wyoming.
Russell, L. S. 1928 A, 107. Paleocene?; Alberta.
Sternberg, C. M. 1924 A, 68 (Pappicthys). Upper Cretaceous (Lance); Saskatchewan.

PARAMIATUS Romer and Fryxell. Type *P. gurleyi* Romer and Fryxell.

Romer and Fryxell 1928 A, 519.

Paramiatus gurleyi Romer and Fryxell.

Romer and Fryxell 1928 A, 519, figs. 1-3
Eocene (Green River); Wyoming.

STYLOMYLEDON Russell. Type *S. lacus* Russell.

Russell, L. S. 1928 A, 103.
1928 B, 264.
The systematic position of this genus is uncertain.

Stylomyleodon lacus Russell.

Russell, L. S. 1928 A, 103, figs. 1-4.
Paleocene (Paskapoo); Alberta.

Stylomyleodon sp. indet.

Russell, L. S. 1928 A, 103. Upper Cretaceous (Lance); Wyoming.

PLATACODON Marsh. Type *P. nanus* Marsh.

Hay, O. P. 1902 A, 565.
Gilmore, C. W. 1924 A, 68.
Palmer, T. S. 1904 A, 542, 887.
The relationships of this genus are very uncertain.

Platacodon nanus Marsh.

Hay, O. P. 1902 A, 565.
Ameghino, F. 1893 C, 81.
Bowen, C. F. 1915 A, 120.
Hatcher, J. B. 1901 A, 128, pl. i, figs. 5, 6.
Lull, R. S. 1915 D, 323, 345.
Russell, L. S. 1928 A, 106.
Upper Cretaceous (Lance); Wyoming.

Platacodon sp. indet.

Gilmore, C. W. 1924 A, 68. Upper Cretaceous (Lance); Saskatchewan.
1924 D, 27 (Platæodon). Upper Cretaceous (Lance); Saskatchewan.
Sternberg, C. M. 1924 A, 68. Upper Cretaceous (Lance); Saskatchewan.

Superorder TELEOSTEI Müller.

Müller, J. 1846 C.
Hay, O. P. 1902 A, 356 (Teleostomi, in part).
Abel, O. 1912 F, 300.
Aladyna, M. 1910 A, 239 ("téléostéens").
Allis, E. P. 1898 B, 83 ("teleosts").
1915 A.
1918 A, 241.
1918 B, 263.
1919 A, 372.
1922 A, 152.
1922 B.
1922 C, 3.
1923 A, 52.
1923 B.
1925 A, 75.
1926 A, 169.
Anthony, R. 1912 A ("téléostéens").
Arldt, T. 1907 D, 684.
1923 A, 495 ("teleostier").
Ayers, H. 1906 A, 77.
Baehr, W. B. 1906 A, 629 ("teleostier").
Baraldi, G. 1877 A, 28, 44.
Bardeleben, K. 1896 A, 113 ("teleostier").
1907 A, 36 ("teleostier").
Beer, G. R. 1925 A, 296, 330.
Belling, D. E. 1912 A, 46.
Bluntschli, H. 1912 B, 382 ("teleostier").
Böker, H. 1927 A, 15 ("teleostier").
Boulenger, G. A. 1901 A, 261 ("teleostean fishes").
1901 D, 43.
1902 B, 295.
1904 A, 162.
1904 D, 541.
Brandt, J. F. 1865 A, 22.
Braus, H. 1906 A ("teleostier").
Bridge, T. W. 1878 A, 705.
1896 A, 544.
Brohl, E. 1909 A, 345, 360 ("teleostier").
Bronn, H. G. 1848 B, 1218.
1849 A, 812, seq.
1862 B, 380.
Carlet, G. 1878 A, 1 ("téléostéens").
Carter, J. T. 1905 A, 129.
Cartier, O. 1875 A, 69 ("teleostier").
Carus, V. 1875 A, 516.
Cockerell, T. D. A. 1911 F, 367 ("teleosts").
Collinge, W. E. 1895 B, 274.
1895 C, 888.
Cunningham, J. T. 1897 A, 492 ("teleosteans").
1912 A, 245, 246.
Dana, J. D. 1863 C, 343 ("teleosts").
Dean, Gudger, Henn 1923 A, 703.
Derjugin, K. 1909 A.
1910 A, 572 ("teleostier").
1910 B, 209 ("teleostier").
Derjugin and Rozhdestvensky 1912 A, 643 ("teleostier").
Dietz, P. A. 1914 A, 99.
1917 A, 79 ("teleostier").
Dollo, L. 1889 E, 153 ("téléostéens").
1892 D, 120 ("téléostéens").
1909 B, (135).
Dombrowski, B. A. 1925 A, 70, fig. 3.
Dormitzer, M. 1852 A, 62 ("teleostier").
Eastman, C. R. 1917 A, 244.
Ebner, V. 1896 A, 146 ("teleostier").
Eggeling, H. 1906 A, 105 ("teleostier").
Elliot, A. J. M. 1907 A, 648.
Emery, C. 1895 A, 224 ("téléostiens").
Fiebiger, J. 1905 A, 141 ("teleostier").
Frassetto, F. 1915 A.
Fulton, T. W. 1906 A, 48 ("teleostean fishes").
Fürbringer, K. 1903 A, 377 ("teleostier").
Fürbringer, M. 1904 A ("teleostier").
Gaupp, E. 1897 A, 543 ("teleosteer").
1898 B ("teleostier").
1901 B, 935 ("teleostier").
1903 A, 113 ("teleostier").
1905 D, 911 ("teleostier").
1905 E, 161 ("teleostier").
1906 B ("teleostier").
Gegenbaur, C. 1866 A, 123 ("teleostier").
1867 A, 60 ("teleostier").
1867 B, 377, 393 ("teleostier").
1871 B ("teleostier").
Gill, T. 1885 C, 98-298.
1905 A, 659.
1909 B, 838.
Goette, A. 1879 A, 117 ("teleostier").
1901 A, 557 ("teleostier").
Goetsch, W. 1915 A, 435 ("teleostier").
1920 A, 12 ("teleostier").
Goodrich, E. S. 1904 A, 471.
1906 A, 344 ("teleosts").
1922 A, 505 ("teleosts").
1924 A, 935.
Gregory, W. K. 1904 A, 62.
1907 D, 449, 466.
Haeckel, E. 1868 A, 441, 446.
1873 A, 512, 516.
1893 A, 242 ("teleostier").
Haller, B. 1906 A, 231 ("teleostier").
Hamburger, R. 1904 A, 75 ("teleostier").

Hammarsten, O. D. 1911 A ("teleostier").
Harrison, R. G. 1893 A, 248 ("teleostier").
1894 A ("teleosts").
1895 A, 500 ("teleostier").
Hase, A. 1907 A, 607 ("teleosteer").
1913 A, 147.
Hasse, C. 1872 A, 419 ("teleostier").
1873 A, 603 ("teleostier").
1873 B, 614 ("teleostier").
Hasse and Schwarck 1870 A, 29, 44 ("teliostier").
Hatschek, B. 1889 B, 115.
Hawkes, O. A. M. 1905 A, 82 ("teleosts").
Heckel, J. 1850 B, 143 ("teleostier").
1851 A, 219 ("teleostier").
Hennig, E. 1920 B, 113 ("teleostier").
Hill, C. 1900 A, 426.
Hilzheimer, M. 1913 A, 471 ("teleostier").
Höfer, B. 1890 A, 106 ("teleostier").
Hoernes, R. 1886 A, 526.
Hubbs, C. L. 1919 A, 570.
1926 A, 73 ("teleosts").
Huxley, T. H. 1859 D, 420.
1859 H, 36.
1861 D, 449.
1863 F, 427.
1876 E, 103, 121.
1880 E, 471.
1883 B, 570.
Jacobshagen, E. 1920 A, 88 ("teleosteer").
Jaekel, O. 1903 F, 37, 46 ("teleostier").
1906 A, 16 ("teleostier").
1908 B, 469 ("teleostier").
1909 D, 719 ("teleostier").
1911 A, 87 (Teleostea).
Jordan, D. S. 1885 A, 98.
1907 B, 225, 761.
1909 A, 565 ("bony fishes").
1923 A, 116.
Keyes, C. A. 1922 A, pl. iii.
Kiaer, J. 1924 A, 95, 113.
Kingsley, J. S. 1894 A, 640 ("teleosts").
1900 A, 249 ("teleosts").
1912 B, 79, figs. 76-78.
1925 A, 12, 33, 105, 237 ("teleosts").
Klaatsch, H. 1890 A, 155, 182, 217 ("teleostier").
1893 B, 654 ("teleostier").
1893 C, 181.
Kolzoff, N. K. 1896 A, 514 ("teleostier").
Koschkaroff, D. N. 1906 A, 209 ("teleostier").
Laaser, P. 1903 A, 571 ("teleostier").
Lakjer, T. 1927 A, 278.
Leunis and Ludwig 1883 A, 657.
Lönnberg, E. 1901 A.
Lütken, C. 1868 C.
1871 A, 286 ("téléostéens").
McMurrich, J. P. 1883 A, 640.
Matthes, E. 1921 A, 226 ("teleostier").
Meek, A. 1916 A, 59.
Menmuir, W. H. 1902 A, 273.
Miall, L. C. 1872 A, 31 ("teleostean").
Müller, J. 1845 A, 129, 135.
Nauck, E. T. 1926 B, 69 ("teleostier").
Norman, E. W. 1926 A ("teleosts").
Nusbaum, J. 1907 A, 297 ("teleostier").
1908 A, 515 ("teleostier").
1908 B, 505 ("teliostier").
Oswald, F. 1909 A, 126.
Paget and Savage 1916 A, 258 ("teleostean fish").
Palacký, J. 1902 B, 141 ("teleosteer").
Parker, W. K. 1879 C, 341.
1881 C, 71.
1888 C, 399.
Parker and Haswell 1897 A, 204.
Pehrson, T. 1922 A ("teleosts").
Petronievics, B. 1919 A, 413 ("téléostéens").
Pompeckj, J. F. 1913 A, 1145.
Prince, E. E. 1887 A, 697 ("teleosteans").
Puccioni, N. 1908 A, 56.
Pychlau, W. 1908 A, 692 ("teleostier").
Rauther, M. 1913 A, 1100.
1919 A, 214 ("teleostier").
Regan, C. T. 1904 A, 330, 331, 346.
1909 A, 66 ("teleosteans").
1909 B, 75, 76.
1912 B, 841.
1923 B, 458 (Teleostei; Neopterygii in part).
Retterer, E. 1905 C, 246 ("téléostéens").
Reynolds, S. H. 1897 A, 105, 106, 126, 556.
Ridewood, W. G. 1894 A, 635.
1896 A, 389.
Röse, C. 1897 A, 60 ("teleostier").
Rohon, J. V. 1902 A, 25 ("teleostier").
Romer, A. S. 1924 A, 122, 138, figs. 1, 10.
Rosén, N. 1915 A, 1 ("teliostier").
1916 A, 24.
Ryder, J. 1885 E, 93 ("teleosts").
1886 A, 71.
Sabatier, A. 1898 A, 928 ("téléostéens").
Sagemehl, M. 1883 A ("teleostier").
1884 A ("teliostier").
Sauvage, H. E. 1872 A, 118 ("téléostéens").
Schauinsland, H. 1906 A, 456 ("teleostier").
Scheel, C. 1893 A, 1 ("teleostier").
Schleip, W. 1904 A, 335 ("teleostier").
Schlesinger, G. 1909 A, (147).
Schlosser, M. 1898 D, 120 ("teleostier").
1917 A, 137, 138 ("teleostier").
Schmalhausen, J. J. 1912 A, 542.
1916 C, 207 ("teleosts").
Schmid-Monnard, C. 1883 A, 97 ("teleostier").
Schöne, G. 1902 A, 1 ("teleostier").
Schuchert, C. 1915 A, 690.
Semon, R. 1898 A, 100 ("teleostier").
Sewertzoff, A. 1896 A, 242 ("teleostier").
1918 A, 207.
1925 A, 276.
1926 A, 481.
1926 C, 42.
1926 D, 83.
1926 F, 274.
Shann, E. W. 1919 A, 558.
Siebenrock, F. 1901 A, 105 ("teleostier").
Solger, B. 1880 A, 388.
Sonies, F. 1907 A, 405 ("teleostier").
Stadtmüller, F. 1926 A, 156, figs. 1, 2 ("teleostier").
Stannius, H. 1854 A, 4, seq.
Stensiö, E. A. 1921 A, 276.
1925 A, 51, 62, 119.
Stephan, P. 1898 A, 355 ("téléostéens").
Stöhr, P. 1882 A, 71 ("teliostier").

Stromer, E. 1912 A, 32, 48.
1917 A, 22.
1925 B, 348, 350.
Supino, F. 1904 A, 625.
Swinnerton, H. H. 1905 A, 319, 321 ("teleosts").
Swinnerton, H. W. 1905 A, 363 ("teleosts").
Terra, P. 1911 A, 206.
Tichomirow, A. 1885 A, 533 ("teleostier").
Tims, H. W. 1905 A, 39, 58.
Tomes, C. S. 1875 C, 362.
1876 A, 257.
Totton, A. K. 1914 A, 257 ("teleosts").
Traquair, R. H. 1870 A, 166.
1900 C, 508.
Uhlmann, E. 1921 A.
Ussow, S. 1900 A, 175 ("teleostier").
Veit, O. 1907 A, 174 ("teleostier").
Wallace, A. R. 1876 A, ii, 424.
Walther, J. 1882 A, 82 ("teleostier").
Watson, D. M. S. 1925 A, 851, 865.
1926 A, 202 ("teleosts").
Whitehouse, R. H. 1910 B, 590.
1910 C, 135 ("teleosts").
1918 A, 139 ("teleosts").
Woodward, A. S. 1898 C, 257.
1906 A, 314 ("teleosteans").
1915 B, lxxiv ("teleostean fishes").
1922 C, 96.
Woodward, H. 1878 A, 22.
Wright, W. 1909 A, 672 ("teleostean fishes").
Zittel and Koken 1911 A, 117.
Zittel and Schlosser 1923 A, 120.
Zittel and Woodward 1902 A, 92.

Class OSTARIOPHYSI.

Abel, O. 1919 A, pp. 56, 157.
Allis, E. P. 1905 A, p. 420.
Arldt, T. 1923 A, p. 505 ("ostariophysen").
Boulenger, G. A. 1901 D, p. 129.
1904 A, pp. 162, 165.
1904 D, p. 573.
1918 B, p. 199 ("ostariophysiens").
Bridge and Haddon 1893 A, 65 (Ostariophyseæ).
Chranilov, I. 1926 A, 49.
Cope, E. D. 1891 N, 22 (Plectospondyli).
Cunningham, J. T. 1912 A, 247.
Dean, Gudger, Henn 1923 A, 693.
Dietz, P. A. 1917 A, 84.
Eigenmann, C. H. 1890 B, 10 (Ostariophysiæ).
Frost, G. A. 1925 A, 553.
Gaupp, E. 1898 B, 823, 865 ("ostariophysen").
Gill, T. 1905 A, 659.
1905 C, p. 617 ("ostariophysial fishes").
Goodrich, E. S. 1909 A, 371 (Cypriniformes).
Gregory, W. K. 1907 D, 449, 472.
Hubbs, C. L. 1919 B, 61.
Jaekel, O. 1911 A, 69, 90.
Jordan, D. S. 1904 A, 598.
1905 A, ii, 159, 584.
1907 B, 265, 378, 763.
1923 A, 134.
Jordan and Evermann 1896 A, 114.
Klaatsch, H. 1890 A, 185 ("ostariophyen").
Meek, A. 1916 A, 168.
Müller, J. 1846 C (Physostomi, in part).
Norman, E. W. 1926 A, 405.
Nusbaum, J. 1908 A, 514 ("ostariophysen").
Rauther, M. 1913 A, 1100.
Regan, C. T. 1909 B, 77.
1911 F, 13.
1911 G, 553.
1912 B, 841, 843.
1922 A, 203.
1924 A, 175.
Ridewood, W. G. 1904 B, 215.
Sachs, M. M. 1912 A, 725.
Sagemehl, M. 1884 A, 22, 25 ("ostariophysen").
Schlesinger, G. 1909 A, (151).
Sörensen, W. 1894 A, 112 (Ostariophyseæ).
1895 A, 400 (Ostariophyseæ).
Stromer, E. 1912 A, 34.
Swinnerton, H. W. 1905 A, 378.
Thilo, O. 1908 A, 788.
Whitehouse, R. H. 1910 B, 598.
Woodward, A. S. 1901 A, ix, 296.
1922 C, 99.
Zittel and Koken 1911 A, 119.

Suborder CHARACINIFORMES Regan.

Regan, C. T. 1922 A, 203.
Boulenger, G. A. 1904 D, 575 (Characinidæ).
Gill, T. 1893 A, 131 (Heterognathi).
1896 E, 205 ("heterognaths").
Goodrich, E. S. 1909 A, 374 (Characinoidei).
Gregory, W. K. 1907 D, 449 (Heterognathi).
Jordan, D. S. 1905 A, ii, 161 (Heterognathi).
1923 A, 134 (Heterognathi).
Jordan and Evermann 1896 A, 329 (Heterognathi).
Regan, C. T. 1911 F, 15 (Characiformes).
Zittel and Schlosser 1923 A, 123 (Characinoidei).

Superfamily CHARACINOIDÆ, new form.

Frost, G. A. 1925 A, 554 (Chariciniformes).
Goodrich, E. S. 1909 A, 374 (Characinoidei).

CHARACINIDÆ Richardson.

Richardson, J. 1856 A, 245.
Abel, O. 1922 F, 77.
Allis, E. P. 1909 A, 213.
Arldt, T. 1907 D, 645.
1923 A, 505 ("characiniden").
Boulenger, G. A. 1901 D, 131, 132.
1904 D, 575.
1917 B, 330.
1918 A, 195.
1918 B, 197 ("characinides").

Bridge and Haddon 1893 A, 65.
Cockerell, T. D. A. 1923 E, 418.
Cope, E. D. 1871 T, 454.
1872 C, 332.
Dean, Gudger, Henn 1923 A, 674.
Gadow, H. 1913 A, 94.
Gaupp, E. 1905 D, 913 ("characiniden").
Gill, T. 1872 C, 16.
1885 C, 132.
1896 E, 205 (Characidæ, Characinidæ).
Gregory, W. K. 1907 D, 473 ("characins").
Günther, A. C. 1880 A, 606.
1881 A, 692.
Jordan, D. S. 1885 A, 125, 132.
1923 A, 134.
Jordan and Evermann 1896 A, 331.
Jordan and Gilbert 1882 A, 254.
Kesteven, H. L. 1926 B, 204.
Kindred, J. E. 1919 A.
Klein, E. F. 1879 A, 104.
1881 A, 330.
1884 A, 135, 138, 147, 153, 156, 199, 226, 243, 246, 248.
1885 A, 116, 130, 144, 164, 195, 199, 211.
Klein, E. F. 1886 A, 225, 260, 290.
Kölliker, A. 1859 A, 665 (Characini).
Loomis, F. B. 1921 A, 194 (Characidæ).
Meek, A. 1916 A, 168.
Norman, E. W. 1926 A.
Rauther, M. 1913 A, 1100.
Regan, C. T. 1911 F, 15 (Characidæ).
1916 B, 546 (Characidæ).
1922 A, 203.
1924 A, 175.
Reissner, E. 1859 B, 429 ("characinen").
Sagemehl, M. 1884 A, 1-119 ("characiniden").
Schelaputin, G. 1906 A, 97 ("characiniden").
Shepherd, C. E. 1910 B, 296, pl. ii, fig. 7.
1916 A, 178.
Siebenrock, F. 1901 A.
Sörensen, W. 1894 A, 111 (Characini).
Stannius, H. 1854 A, 5, 25, 99 (Characini).
Starks, E. C. 1926 A, 88.
Stensiö, E. A. 1925 A, 36.
Terra, P. 1911 A, 212.
Woodward, A. S. 1901 A, 297.
Wright, R. R. 1885 A, 108.
Zittel and Schlosser 1923 A, 123.

Ischyrhiza Leidy. Type *I. mira* Leidy.

Hay, O. P. 1902 A, 398.
Arldt, T. 1923 A, 517 (Ichyrorhiza).
Boulenger, G. A. 1918 A, 195.
1918 B, 199.
Eastman, C. R. 1901 B, 111.
1904 E, 298 (Syn. of Onchosaurus).
1904 H, 93.
1917 A, 297.
Fowler, H. W. 1911 A, 167.
Jordan, D. S. 1919 B, 272 (Syn.? of Pachyrhizodus).
1923 A, 118.
Priem, F. 1908 B, 62.

Ischyrhiza mira Leidy.

Hay, O. P. 1902 A, 398.
Berry, E. W. 1916 A, 358, pl. ix, figs. 6-8.
Boulenger, G. A. 1918 B, 199 (I. antiqua).
Eastman, C. R. 1901 B, 111.
1904 E, 298 (I. antiqua a syn.).
1904 H, 93.
Eastman, C. R. 1917 A, 298, pl. xi, fig. 2.
Fowler, H. W. 1911 A, 167, fig. 103.
Gidley, J. W. 1911, in Veatch and Stephenson 1911 A, 208, 215.
1926 F, 192, pl. lxii, fig. 10.
Hay, O. P. 1923 A, 363.
Hussakof, L. 1908 A, 77.
Priem, F. 1908 B, 62, fig. 25 (I. antiqua).
Upper Cretaceous (Woodbury, etc.); New Jersey: (Ripley); Mississippi, Georgia, South Carolina, North Carolina: (Fox Hills); New Mexico: (Monmouth?); Maryland.

Ischyrhiza? radiata Clark.

Hay, O. P. 1902 A, 398.
Clark and Miller 1912 A, 117, 118 (Xiphias?).
Eastman, C. R. 1901 B, 112, pl. xii, fig. 8 (Xiphias?).
Woodward, A. S. 1901 A, 46, 614.
Eocene (Pamunkey); Virginia: (Aquia); Maryland.

ERYTHRINOLEPIDÆ Cockerell.

Cockerell, T. D. A. 1919 A, 182.
Jordan, D. S. 1923 A, 119 (To Clupeoidæ).

Erythrinolepis Cockerell. Type *E. mowriensis* Cockerell.

Cockerell, T. D. A. 1919 A, 182.

Erythrinolepis chicoensis Cockerell.

Cockerell, T. D. A. 1919 A, 182, pl. xxxvi, figs. 1, 2.
Upper Cretaceous (Chico); California.

Erythrinolepis mowriensis Cockerell.

Cockerell, T. D. A. 1919 A, 182, pl. xxxvi, figs. 3-6.
Upper Cretaceous (Mowry); Wyoming.

Suborder Cypriniformes Goodrich.

Goodrich, E. S. 1909 A, 371.
Hay, O. P. 1902 A, 394 (Plectospondyli).
Chranilov, I. 1926 A, 51.
Cope, E. D. 1871 T, 452 (Plectospondyli).
1872 C, 332 (Plectospondyli).
Gill, T. 1861 B, 6 (Eventognathi).
Gill, T. 1885 C, 125 (Eventognathi).
1905 G, 196 ("eventognaths").
Jordan, D. S. 1885 A, 125 (Eventognathi).
1907 B, 382 (Plectospondyli).
1923 A, 139 (Eventognathi).
Lönnberg, E. 1902 A (Cyprinoidei).

Regan, C. T. 1911 F, 13, 14 (Cyprinoidea).
1911 G, 555 ("cyprinoids").
1922 A, 203 (Cyprinoidea).
Starks, E. C. 1904 C, 254 (Plectospondyli).
Zittel and Schlosser 1923 A, 123.

Superfamily CYPRINOIDÆ, a term given superfamily significance.

Boulenger, G. A. 1918 B, 199 ("cyprinides").
Eigenmann, C. H. 1890 B, 10 (Eventognathi).
Frost, G. A. 1925 A, 553 (Cyprinoidea).
Gill, T. 1861 B, 6 (Eventognathi).
1905 F ("eventognaths").
Gregory, W. K. 1907 D, 450, 477 (Eventognathi).
Jordan, D. S. 1905 A, ii, 162, 569 (Eventognathi).
1907 B, 381, 764 (Eventognathi).
Norman, E. W. 1926 A, 415 (Cyprinoidea).
Regan, C. T. 1909 B, 77 (Cyprinoidei).
1911 F, 26 (Cypriniformes).

CATOSTOMIDÆ Cope.

Cope, E. D. 1872 C, 332.
Hay, O. P. 1902 A, 394 (Catostominæ).
Arldt, T. 1907 D, 284, 285 (Catostominæ).
1912 A, 716, 762 (Catostominæ).
1923 A, 506 ("catastominen").
Boulenger, G. A. 1904 D, 581 (Catostominæ).
Chranilov, I. 1926 A, 49.
Cockerell, T. D. A. 1913 B, 139.
Cockerell and Allison 1909 A, 157.
Edwards, L. F. 1926 A, 257 (Catastomidæ).
Gill, T. 1861 B, 8 (Catastomoidæ).
1875 B, 252 (Catastomidæ).
Gill, T. 1885 C, 131.
1905 G, 196 ("catostomids").
Goodrich, E. S. 1909 A, 375 (Catostominæ).
Jordan, D. S. 1885 A, 131.
1905 A, ii, 171, 562.
1907 B, 390.
1923 A, 139.
Meek, A. 1916 A, 173 (Catostominæ).
Rauther, M. 1913 A, 1101 (Catostominæ).
Regan, C. T. 1911 F, 27.
1922 A, 205.
Sagemehl, M. 1891 A ("catastomiden").

CATOSTOMUS Le Sueur. Type *Cyprinus catostomus* Forster.

Hay, O. P. 1902 A, 394.
Allis, E. P. 1909 A, 11.
1919 C, 252.
Arldt, T. 1907 D, 284, 285.
Chranilov, I. 1926 A, 49, figs. 1-3.
Cockerell, T. D. A. 1910 B, 62.
1911 F, 370.
1913 B, 139.
Cockerell and Allison 1909 A, 158, fig. 2.
Duméril, A. 1856 A, 410 ("catostome").
Edwards, L. F. 1926 A, 257, figs. 1-6 (Catastomus).
Heilprin, A. 1887 A, 68.
Hilgard, T. C. 1858 A, 89.
1860 A, 679.
Hyrtl, C. J. 1862 A, 101.
Jordan, D. S. 1885 A, 132.
Jordan and Evermann 1917 A, 96.
Jordan and Gilbert 1882 A, 124.
Regan, C. T. 1922 A, 206.
Sagemehl, M. 1884 A, 7, 102.
1891 A, 543, pls. xx, xxvii.
Scharff, R. F. 1911 A, 89.
Stannius, H. 1854 A (Catastomus).
Woodward, A. S. 1901 A, 299.

Catostomus cristatus Cope.

Hay, O. P. 1902 A, 394.
1927 D, 265, 268.
Hussakof, L. 1908 A, 65, fig. 33.
Pleistocene (Idaho); Idaho.

Catostomus reddingi Cope.

Cope, E. D. 1883 L, 160.
Hussakof, L. 1908 A, 66, fig. 34.
Pleistocene (Idaho); Idaho.

Catostomus shoshonensis Cope.

Hay, O. P. 1902 A, 394.
1927 D, 265, 268.
Pleistocene (Idaho); Idaho.

CHASMISTES Jordan and Gilbert. Type *C. liorus* Jordan.

Jordan, D. S. 1878, Bull. Hayden's Geol. Surv., IV, 417.
Arldt, T. 1923 A, 506.
Cope, E. D. 1883 L, 148.
Jordan, D. S. 1907 A, 140.
1919 B, 396.
Jordan and Evermann 1896 A, 182.
Jordan and Gilbert 1882 A, 131.

Chasmistes batrachops (Cope).

Hay, O. P. 1902 A, 394 (Catostomus).
1927 D, 242 (Catostomus); 243 Chamistes.
Hussakof, L. 1908 A, 65, fig. 32 (Catostomus).
Starks, E. C. 1907, in Jordan, D. S. 1907 A, 143, 144, fig. 33.
Pleistocene (Fossil Lake); Oregon.

Chasmistes oregonus Starks.

Starks, E. C. 1907, in Jordan, D. S. 1907 A, 141, 144, fig. 32.
Hay, O. P. 1902 A, 394 (Catostomus labiatus, in part).
Cope, E. D. 1883 L, 150 (Catostomus labiatus, not of Ayres).
Hay, O. P. 1927 D, 243.
Pleistocene (Fossil Lake), Oregon.

AMYZON Cope. Type *A. mentale* Cope.

Hay, O. P. 1902 A, 395.
Arldt, T. 1907 D, 285.
1923 A, 506.
Cockerell, T. D. A. 1906 A, 163.
1908 C, 164.
Eastman, C. R. 1917 A, 292.
Regan, C. T. 1922 A, 206.
Schlosser, M. 1917 A, 144.
Woodward, A. S. 1901 A, 300.

Amyzon brevipinne Cope.

Hay, O. P. 1902 A, 395.
Eastman, C. R. 1917 A, 292, pl. xix, figs. 1, 2.
Lambe, L. M. 1904 C, 30, 39, 44.
1906 C, 151, pl. i, figs. 1, 2.
1906 D, 174.
1906 E, 137.
Woodward, A. S. 1901 A, 300.
Tertiary (Amyzon beds); British Columbia

Amyzon commune Cope.

Hay, O. P. 1902 A, 395.
Cockerell, T. D. A. 1908 C, 164.
Lambe, L. M. 1906 C, 151, pl. i, fig. 3.
1906 E, 137.
Merrill, G. P. 1907 A, 6.
Woodward, A. S. 1901 A, 300.
Miocene (Florissant); Colorado.

Amyzon fusiforme Cope.

Hay, O. P. 1902 A, 395.
Cockerell, T. D. A. 1908 C, 164.
Woodward, A. S. 1901 A, 300.
Miocene (Florissant); Colorado.

Amyzon mentale Cope.

Hay, O. P. 1902 A, 395.
Cockerell, T. D. A. 1908 C, 164.
Merrill, G. P. 1907 A, 6.
Woodward, A. S. 1901 A, 300.
Miocene (Florissant); Colorado.

Amyzon pandatum Cope.

Hay, O. P. 1902 A, 395.
Cockerell, T. D. A. 1908 C, 164.
Woodward, A. S. 1901 A, 300.
Miocene (Florissant); Colorado.

Amyzon sp. indet.

Cockerell, T. D. A. 1914 A, 190.
Miocene (Florissant); Colorado.

CYPRINIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 94, 113.
Hay, O. P. 1902 A, 394.
Abel, O. 1912 F, 518 ("cypriniden").
1919 A, 49, fig. 23 (Cyprinus).
1922 F, 77.
Agassiz, L. 1836 A, 149.
1838 A, 73 ("karpfen").
1840 C, 110, pl. iv, fig. 7 (Cyprinus).
1844 D, 139 ("cycloides").
1845 C, 325 (Cyprini).
Alessandrini, A. 1849 A, 375, pl. xxiii, figs. 1, 3 (Cyprinus).
Allis, E. P. 1897 A, 13.
1898 A, 436.
1898 B, 95.
1905 A, 401, 437.
1909 A, 213.
1913 A, 327.
1918 A, 242.
1922 B, 204.
Anonymous 1821 A, 273 (Cyprinus).
Arldt, T. 1907 D, 649.
1912 A, 716, 762.
1923 A, 506 ("cypriniden").
Baehr, W. B. 1906 A, 629 (Cyprinus).
Baudelot, E. 1873 A, 97, 206, pls. x, xi (Cyprinus).
Belling, D. E. 1912 A, 60 ("cyprinoiden").
Bonaparte, C. L. 1833 B, 1200.
1838 B, 132.
Boulenger, G. A. 1904 A, 166.
1904 D, 581, 737.
1917 B, 330.
Bridge, T. W. 1878 A, 705 (Cyprinoidei).
1896 A, 547.
Bridge and Haddon 1893 A, 65-333.
Bronn, H. G. 1849 A, 780 (Cyprinoidei).
Carus, V. 1875 A, 564 (Cyprinoidei).
Chranilov, I. 1925 A, 90.
1926 A, 49.
Cockerell, T. D. A. 1910 A, 475.
1910 F, 1.
1911 E, 213.
1911 F, 371.
1913 B, 128.
Cockerell and Allison 1909 A, 157.
Cockerell and Callaway 1909 A, 121.
Cockerell and Moore 1910 A, 252.
1910 B, 91 ("cyprinids").
Collinge, W. E. 1895 B, 286.
Cope, E. D. 1871 T, 454.
Cunningham, J. T. 1912 A, 247.
Cuvier, G. 1805 A ("carpes").
1815 A, 110 ("cyprinus").
Dean, Gudger, Henn 1923 A, 676.
Demoll, R. 1921 A, 442, pls. xv, xvi ("karpfen").
Derjugin, K. M. 1909 A (Cyprinoidea).
Dormitzer, M. 1852 A, 62 ("cypriniden").
Duméril, A. 1856 A, 404 ("cyprinoides").
Ebner, V. 1896 A, 127 ("cyprinoiden").
Eimer, G. H. T. 1901 A ("cyprinoiden").
Fitzinger, L. J. 1873 A, 38 (Cyprini).
Friedmann, E. 1897 A, 567, figs. 10-16 (Cyprinus).
Frost, G. A. 1925 A, 556.
Fryd, C. 1901 A, 35.
Fulton, T. W. 1906 A, 77.
Gadow, H. 1913 A, 94.
Gatzinow, V. 1900 A, 86 ("cyprinoiden").
Gaupp, E. 1901 B, 939 ("cyprinoiden").
Geoffroy-St. Hilaire, E. F. 1807 B, 414 ("cyprins").
1824 A, 140 ("cyprins").

Geoffroy-St. Hilaire, E. F. 1824 B, 145 ("cyprins").
1824 E, 100 (Cyprinus).
1824 G, 439 (Cyprinus).
Giebel, C. G. 1855 A, 107 ("cyprinoides").
Gill, T. 1861 B, 7 ("cyprinoidæ").
1865 E, 69 ("cyprinoids").
1875 B, 254 ("cyprinoids").
1885 C, 126.
1905 C, 617 ("cyprinids").
1905 G, 195 ("cyprinids").
Goetsch, W. 1915 A, 459 (Cyprinus).
1920 A, 10, 16 (Cyprinus).
Goette, A. 1879 A, 127 ("cyprinoiden").
1901 A, 533 ("cypriniden").
Goodrich, E. S. 1909 A, 375, fig. 358.
Gregory, W. K. 1907 D, 450.
Haller, B. 1906 A, 254, pl. xvi, fig. 11 ("cyprinoiden").
Hamburger, R. 1904 A, 79, 84, pl. ii (Cyprinus, Squalius).
Hase, A. 1907 A ("cypriniden").
Hasse, C. 1872 A, figs. (Cyprinus).
1873 A, 583, figs. 1-6 ("cyprinoiden").
Hasse and Schwarck 1870 A, 45 ("cyprinoiden").
Heckel, J. 1836 A, 221 ("cyprinen").
1850 A, 364 ("cypriniden").
1850 B, 146 ("cypriniden").
1851 A, 222 ("cypriniden").
Heilprin, A. 1887 A, 68, 69.
Hilgard, T. C. 1857 A, 679 ("cyprinoids").
Hoernes, R. 1886 A, 531 (Cyprinoidei).
Hoppe, R. 1894 A, 5 pl. i (Leuciscus).
Hora, S. L. 1922 A, 1, figs. 1, 2 (Labeo).
Hubbs, C. L. 1919 B, 65.
1926 A, 58 ("cyprinids").
Huxley, T. H. 1859 D, 401, fig. 6 ("carp").
1859 H, 38.
1863 F, 427 ("cyprinoids").
Hyrtl, C. J. 1862 A, 95 ("cyprinoiden").
Ihering, H. 1891 C, 24 ("cypriniden").
1909 A, 289 ("cypriniden").
Imms, A. D. 1904 A, 23.
Jordan, D. S. 1885 A, 126.
1905 A, ii. 163, 565.
1907 B, 382.
1923 A, 139.
Jordan and Gilbert 1882 A, 144.
Kesteven, H. L. 1922 A, 315.
1926 B, 204.
Kindred, J. E. 1919 A.
Klaatsch, H. 1890 A, 158, 185 ("cyprinoiden").
Klein, E. F. 1868 A ("cypriniden").
1879 A, 70, 79, 109, 118, 123 (Cyprinoidei).
1884 A, 135, 138, 147, 156, 164, 201, 246, 251.
1885 A, 115, 130, 150, 164, 177, 199, 214, 247.
1886 A, 226, 262, 293.
Kner, R. 1861 A, 243 (Cyprinoidei).
Köstlin, O. 1844 A ("cyprinoiden").
Kolzoff, N. K. 1896 A, 19, figs. 8, 9.
Lavocat, A. 1896 B, 194 ("carpes").
Leunis and Ludwig 1883 A, 726.
Mantell, G. A. 1844 A, 665 ("cyprinoids").
McMurrich, J. P. 1883 A, 629 ("cyprinoids").
Meckel, J. F. 1825 A ("karpfen").
Meek, A. 1916 A, 173.
Mivart, St. G. 1871 B, 376 ("carp").
Moodie, R. L. 1922 B, 320.
Müller, J. 1841 B, cliii ("cyprinen").
Norman, E. W. 1926 A.
Nusbaum, J. 1881 A, 552.
1908 A, 513 (Cyprinus).
1908 B, 506 ("cyprinoiden").
Owen, R. 1866 A, 10, 43.
Palacký, J. 1902 B, 149 ("cypriniden").
Pevsner, V. 1926 A, 303, figs. 1-6 (Carassius, Rutilus).
Peyer, B. 1922 A, 496 (Cyprinus).
Pychlau, W. 1908 A, 693 ("cyprinoiden").
Rauther, M. 1913 A, 1101.
Regan, C. T. 1911 F, 27.
1922 A, 205.
1924 A, 175.
Reis, C. 1905 A, 222 ("cyprinoides").
Reissner, E. 1859 B, 429 ("cyprinoiden").
Ryder, J. 1886 A, 72 ("cyprinoids").
Sabatier, A. 1896 A, 122 ("cyprinides").
Sachs, M. M. 1912 A, 725 ("cyprinoiden").
Sagemehl, M. 1883 A ("cypriniden").
Schauinsland, H. 1906 A, 474 ("cyprinoiden").
Scheel, C. 1893 A, 16 ("cyprinoiden").
Schelaputin, G. 1906 A, 97 (Cyprinoidæ).
Schlosser, M. 1917 A, 144 ("cypriniden").
Schmalhausen, J. J. 1913 A, 12 ("cyprinen").
Shepherd, C. E. 1910 A, 419.
1910 B, 296, pl. i, fig. 16 (Cyprinus).
1912 A, 201 (Cyprininæ).
1916 A, 178.
Siebenrock, F. 1901 A, 108.
Sorensen, W. 1894 A, 114 (Cyprinoidei).
1895 A, 401.
Solger, B. 1880 A, 382 (Cyprinus).
Stannius, H. 1849 A, 539 (Cyprinus).
Starks, E. C. 1916 A, 20.
Stensiö, E. A. 1925 A, 36.
Stephan, P. 1898 A, 358 ("cyprinidés").
1900 A, 296 ("cyprinidés").
Storch, O. 1911 A, 201 ("goldfische").
Stoss, H. 1921 A, 411, pl. xviii; text-figs. 1-12 ("cypriniden").
Terra, P. 1911 A, 210.
Thilo, O. 1908 A, 777, 788.
Trouessart, E. L. 1906 A, 212.
Uhlmann, E. 1921 A, 322 ("cypriniden").
Vaillant, L. 1896 A, 275 ("cyprinoides").
Wagner, R. 1843 A ("karpfen").
Wallace, A. R. 1876 A, ii, 451.
Weber, E. H. 1821 A, 1061 (Cyprinus).
Williamson, W. C. 1851 A, 650, pl. xxviii, fig. 9 ("carp").
Woodward, A. S. 1901 A, 299.
Zittel and Koken 1911 A, 122.
Zittel and Schlosser 1923 A, 123.
Zittel and Woodward 1902 A, 100.

MYLOPHARODON Ayres.

Ayres, W. O. 1855, Proc. Calif. Acad. Nat. Sci., 33.
Arldt, T. 1923 A, 507.

Type *M. robustus* Ayres.

Cockerell, T. D. A. 1913 B, 130.
Gill, T. 1865 E, 70.
Jordan and Evermann 1896 A, 219.

Newberry, J. S. 1870 D, 28.

Mylopharodon conocephalus Baird and Girard.

Baird and Girard 1854, Proc. Acad. Nat. Sci. Phila., 134 (Gila).

Hay, O. P. 1927 D, 216.
Jordan, D. S. 1907 A, 131.
Jordan and Evermann 1896 A, pt. i, 219.
Miller, L. H. 1912 A, 71 (This species?).
Sinclair, W. J. 1904 A, 18 (This species?).
Pleistocene (Potter Creek Cave), California.

PTYCHOCHEILUS Agassiz. Type *P. gracilis* Agassiz = *Gila grandis* Ayres.

Agassiz, L. 1855, Amer. Jour. Sci. (2), xix, p. 227.
Cockerell, T. D. A. 1913 B, 131.
Jordan, D. S. 1885 A, 129, fig. 86.
Jordan and Evermann 1896 A, 224 (Type P. gracilis).
Jordan and Gilbert 1882 A, 225 (Type P. oregonensis).

Ptychocheilus grandis (Ayres).

Ayres, W. O. 1854, Proc. Acad. Nat. Sci. Calif., 18 (Gila).
Hay, O. P. 1927 D, 216.
Jordan, D. S. 1905 A, i, 164, fig. 125; ii, 169, fig. 13 (P. grandis).
Jordan and Evermann 1896 A, 224 (Syn. of P. oregonensis).
Jordan and Gilbert 1882 A, 226 (Type P. oregonensis).
Miller, L. H. 1912 A, 71 (This species?).
Sinclair, W. J. 1904 A, 18.
This species may be identical with P. *oregonensis*.
Recent; Rivers about San Francisco: Pleistocene; California.

Ptychocheilus tularis Jordan.

Jordan, D. S. 1927 B, 95.
Pleistocene?; California.

DIASTICHUS Cope. Type *D. macrodon* Cope.

Hay, O. P. 1902 A, 395.

Diastichus macrodon Cope.

Hay, O. P. 1902 A, 395.
1927 D, 265, 268.
Woodward, A. S. 1901 A, 322.
Pleistocene (Idaho); Idaho.

Diastichus parvidens Cope.

Hay, O. P. 1902 A, 395.
1927 D, 265, 268.

Woodward, A. S. 1901 A, 322.
Pleistocene (Idaho); Idaho.

Diastichus strangulatus Cope.

Hay, O. P. 1902 A, 395.
1927 D, 265, 268.
Hussakof, L. 1908 A, 70; pl. v, figs. 5, 6.
Woodward, A. S. 1901 A, 322.
Pleistocene (Idaho); Idaho.

APHELICHTHYS Cope. Type *A. lindahlii* Cope.

Hay, O. P. 1902 A, 395.

Aphelichthys lindahlii Cope.

Hay, O. P. 1902 A, 395.
Pliocene or Pleistocene; Illinois.

SIPHATELES Cope. Type *S. vittatus* Cope.

Cope, E. D. 1883 L, 146.
Hay, O. P. 1902 A, 395 (Rutilus).
Cockerell, T. D. A. 1909 C, 217 (Myloleucus).
1913 B, 130.
Cockerell and Allison 1909 A, 161 (Rutilus).
Jordan, D. S. 1910 B, 185 (Rutilus).
1910 C, 634 (Myloleucus).
1919 B, 361.
Jordan and Evermann 1917 A, 112 (Rutilus).
Jordan and Gilbert 1882 A, 244, 287 (Myloleucus).

Siphateles altarcus (Cope).

Hay, O. P. 1902 A, 395 (Rutilus).
Cope, E. D. 1878 II, 125 (Anchybopsis).
Hay, O. P. 1927 D, 242 (Leucus); 243 (Siphateles).
Pleistocene (Fossil Lake); Oregon.

Siphateles gibbarcus (Cope).

Hay, O. P. 1902 A, 395 (Rutilus).
Cope, E. D. 1878 C, 22 (Anchybopsis breviarcus).
1878 II, 125 (Anchybopsis).
Hay, O. P. 1927 D, 242 (Myloleucus); 243 (Siphateles).
Pleistocene (Fossil Lake); Oregon.

Siphateles latus (Cope).

Hay, O. P. 1902 A, 395 (Rutilus).
1927 D, 268 (S. latus); 265 (Anchybopsis fasciolatus. This species?).
Russell, I. C. 1902 A, 56 ("Anchybopsis fasciolatus Cope." Nomen nudum).
Woodward, A. S. 1901 A, 322 (Leucus).
Pleistocene (Idaho); Idaho.

NOTROPIS Raf. Type *N. atherinoides* Raf.

Hay, O. P. 1902 A, 396.
Cockerell, T. D. A. 1909 B, 189 (Notropinæ).
1913 B, 130.
Cockerell and Allison 1909 A, 158, fig. 3.
Cockerell and Callaway 1909 B, 189, 195.
Gill, T. 1907 C, pl. L, fig. 11.

Hubbs, C. L. 1922 A, 360, figs. 1, 4, 5, 7.
1923 A, 208.
Jordan, D. S. 1885 A, 127.
1905 A, ii, 165.
Jordan and Evermann 1896 A, 254.

Notropis angustarcus (Cope).

Hay, O. P. 1902 A, 396.
1927 D, 242 (Cliola).
Hussakof, L. 1908 A, 84, pl. v, figs. 3, 4.
Pleistocene (Lower); Oregon.

RICHARDSONIUS Girard. Type *Abramis balteatus* Baird and Girard.

Unless otherwise indicated the authors as quoted use the name *Leuciscus*.
Girard, C. 1856, Proc. Acad. Nat. Sci. Phila., viii, 201 (Richardsonius).
Hay, O. P. 1902 A, 396.
Agassiz, L. 1836 A, 150.
Arldt, T. 1907 D, 285.
Bronn, H. G. 1848 A, 639.
Cockerell, T. D. A. 1909 C, 216 (Richardsonius).
1911 F, 371.
1913 B, 131 (Richardsonius).
Cockerell and Allison 1909 A, 157, 159.
Eimer, G. H. T. 1901 A, 259.
Fryd, C. 1901 A, 36.
Fuchs, H. 1912 D, 213.
Fulton, T. W. 1906 A, 77, pl. iiib.
Hase, A. 1907 A, 633.
Hubbs, C. L. 1926 A, 67.
Jordan, D. S. 1905 A, ii, 169, 579.
1907 B, 388.
1910 B, 185, 634 (Richardsonius).
1919 B, 270 (Richardsonius).
Jordan and Evermann 1896 A, 238 (Subg. of Leuciscus).
1917 A, 37, 99.
Jordan and Gilbert 1882 A, 251.
Lucas, F. A. 1900 G, 223.
Owen, R. 1845 B, 147, pl. lvii, fig. 4.
Palacký, J. 1902 B, 149.
Ridewood, W. G. 1904 A, 62.
Woodward, A. S. 1901 A, 305.

Richardsonius arciferus (Cope).

Hay, O. P. 1902 A, 396 (Leuciscus).
1927 D, 265, 268.
Woodward, A. S. 1901 A, 323 (Squalius).
Pleistocene (Idaho); Idaho.

Richardsonius bairdii (Cope).

Hay, O. P. 1902 A, 396 (Leuciscus).
1927 D, 265, 268.
Woodward, A. S. 1901 A, 323 (Squalius).
Pleistocene (Idaho); Idaho.

Richardsonius condonianus (Cope).

Hay, O. P. 1902 A, 395 (Rutilus).
1927 D, 265, 268.
Hussakof, L. 1908 A, 96, pl. v, figs. 7, 8 (Rutilus).
Woodward, A. S. 1901 A, 322 (Leucus).
Pleistocene (Idaho); Idaho.

Richardsonius laminatus (Cope).

Hay, O. P. 1902 A, 396 (Leuciscus).
1927 D, 268.
Woodward, A. S. 1901 A, 323 (Squalius).
Pleistocene (Idaho); Idaho.

Richardsonius posticus (Cope).

Hay, O. P. 1902 A, 396 (Leuciscus).
1927 D, 265, 268.
Woodward, A. S. 1901 A, 323 (Squalius).
Pleistocene (Idaho); Idaho.

Richardsonius reddingi (Cope).

Hay, O. P. 1902 A, 396 (Leuciscus).
1927 D, 265, 268.
Hussakof, L. 1908 A, 80, pl. v, figs. 1, 2 (Leuciscus).
Woodward, A. S. 1901 A, 323 (Squalius).
Pleistocene (Idaho); Idaho.

Richardsonius rosei (Hussakof).

Hussakof, L. 1916 D, 18, fig. 1 (Leuciscus).
Miocene (Tranquille); British Columbia.

Richardsonius turneri (Lucas).

Hay, O. P. 1902 A, 396 (Leuciscus).
Andreae, A. 1904 B, 461 (Leuciscus).
Blake, W. P. 1867 B, 306 ("fish." This species?).
Cockerell, T. D. A. 1914 A, 190.
Eastman, C. R. 1917 A, 292, pl. xviii, fig. 4 (Leuciscus).
Jordan, D. S. 1905 A, ii, 175 (Leuciscus).
Lucas, F. A. 1900 G, 223, pl. xxxi (Leuciscus).
Merrill, G. P. 1907 A, 13 (Leuciscus).
Sauvage, H. E. 1901 G, 81 (Leuciscus).
Woodward, A. S. 1901 A, 311 (Leuciscus).
Miocene (Esmeralda); Nevada.

MYLOCYPRINUS Leidy. Type *M. robustus* Leidy.

Hay, O. P. 1902 A, 396.
Woodward, A. S. 1901 A, 323 (=Mylopharyngodon).

Mylocyprinus inflexus Cope.

Hay, O. P. 1902 A, 396.
1927 D, 265, 268.
Hussakof, L. 1908 A, 82, pl. v, figs. 11, 12.
Woodward, A. S. 1901 A, 322.
Pleistocene (Idaho); Idaho.

Mylocyprinus robustus Leidy.

Hay, O. P. 1902 A, 396.
1927 D, 104.
1927 D, 268 (Siphateles r. robustus; S. r. longidens; S. r. kingi).
Hussakof, L. 1908 A, 82, pl. v, figs. 9, 10.
Merrill, G. P. 1907 A, 13 (M. robustus, M. kingii).
Woodward, A. S. 1901 A, 322.
Pleistocene (Idaho); Idaho.

ALISODON Hay. Type *A. mirus.*

Hay, O. P. 1920 B, 132.

Alisodon mirus Hay.

Hay, O. P. 1920 B, 132; pl. ix, figs. 8, 9.
1924 D, 247.
Pleistocene; Texas.

COBITIDÆ Swainson.

Swainson, W. 1838 A, i, 231.
Allis, E. P. 1909 A, 213 (Cobitis).
Arldt, T. 1923 A, 507 ("cobitinen").
Bloch, L. 1916 A, 136 ("cobitiden").
Boulenger, G. A. 1904 D, 582 (Cobitidinæ).
Chranilov, I. 1925 A, 90, fig. 18.
1926 A, 49.
Cockerell, T. D. A. 1913 B, 140.
Cope, E. D. 1871 T, 454.
Dean, Gudger, Henn 1923 A, 364, 381, 612.
Frost, G. A. 1925 A, 559.
Geoffrey-St. Hilaire, E. F. 1824 G, 439 (Cobitis).
Gill, T. 1861 B, 7 (Cobitoidæ).
1885 C, 125.
1905 G, 196 ("cobitids").
Goodrich, E. S. 1909 A, 376 (Cobitidinæ).
Günther, A. C. 1868 A, 344 (Cobitidina).
Jordan, D. S. 1885 A, 125.
1923 A, 144.
Klaatsch, H. 1890 A, 156, 169, pl. viii (Cobitis).
Klein, E. F. 1881 A, 325 (Cobitis).
1885 A, 177.
1886 A, 262, 263.
Meek, A. 1916 A, 176 (Cobitidinæ).
Owen, R. 1848 B, 92, 98, pl. i, fig. 7 (Cobitis).
Rauther, M. 1913 A, 1101 (Cobitidinæ).
Regan, C. T. 1911 F, 30.
1922 A, 205.
Sagemehl, M. 1891 A ("cobitiden").
Schelaputin, G. 1906 A, 97.
Sörensen, W. 1894 A, 111 (Cobitini).

COBITIS Linnæus. Type *Cobitis tænia* Linn.

Linnæus, C. 1858 A, 303.
Allis, E. P. 1909 A, 213.
Arldt, T. 1923 A, 507.
Bloch, L. 1916 A, 136, pls. v, vi.
Chranilov, I. 1925 A, 90, figs. 3, 5, 6, 15, 16.
Dean, Gudger, Henn 1923 A, 675.
Günther, A. C. 1868 A, 362.
Hasse, C. 1873 A, 585, figs. 7, 8.
Jordan, D. S. 1885 A, 126, fig. 83.
Jordan and Evermann 1917 A, 14.
Owen, R. 1848 B, 92, 98, pl. i.
Reissner, E. 1859 B, 430.
Sagemehl, M. 1891 A.
Stannius, H. 1854 A, 64.
Woodward, A. S. 1901 A, 320.
Zittel, K. A. 1890 A, 284.

Cobitis sp. indet.

Cope, E. D. 1883 L, 161 (This genus?). Pleistocene (Idaho); Idaho.
Hay, O. P. 1927 D, 265, 268. Pleistocene (Idaho); Idaho.

Suborder SILURIFORMES, new name.

Unless otherwise indicated, the authors, as cited, use the name Nematognathi.
Hay, O. P. 1902 A, 381.
Agassiz, L. 1844 D, 139 ("cycloïdes").
1844 E, 332 ("cycloïdes").
1868 A, 354 ("siluroids").
Bridge, T. W. 1878 A, 705 (Siluroidei).
Cope, E. D. 1871 T, 452, 453.
1891 N, 22.
Dean, Gudger, Henn 1923 A, 637.
Eigenmann, C. H. 1890 B, 10.
Fitzinger, L. J. 1873 A, 44 (Siluri).
Gill, T. 1885 C, 110.
Goetsch, W. 1920 A, 501 ("siluroiden").
Gregory, W. K. 1907 D, 450, 475.
Huxley, T. H. 1858 D, 520 (Siluroidei).
Jordan, D. S. 1885 A, 110 (Nematognathi).
1903 A, 136.
1905 A, ii, 177, 582.
1907 B, 396, 764.
1923 A, 145.
Jordan and Gilbert 1882 A, 95.
Lönnberg, E. 1902 A (Siluroidei).
Regan, C. T. 1909 B, 77 (Siluroidei).
1911 F, 14 (Siluroidea).
1911 G, 553 ("siluroids").
1922 A, 203 (Siluroidea).
Starks, E. C. 1904 C, 254 (Nemotognathi).
1926 A, 88.
Woodward, A. S. 1901 A, ix, 296 (Ostariophysi, in part).
Wright, R. R. 1885 A, 107.
Zittel and Schlosser 1923 A, 124 (Siluroidei).

Superfamily SILUROIDÆ, Sörensen.

Sörensen, W. 1894 A, 109.
Bassoli, G. G. 1906 A, 37, pl. i (otoliths).
Chranilov, I. 1926 A, 49 (Siluroidei).
Gill, T. 1873 F, 11 (Siluroidea).
Norman, E. W. 1926 A, 414 (Siluroidea).
Peyer, B. 1922 A, 536 (Siluroidea).
Reissner, E. 1859 B, 421 ("siluroiden").
Sörenson, W. 1895 A, 205, 518.
1897 A. 172.
Steinmann, G. 1927 A, 80 ("siluroiden").

SILURIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 95, 114.
Hay, O. P. 1902 A, 382.
Abel, O. 1912 F, 565.
1922 F.
Adloff, P. 1920 A, 175 ("welse").
Agassiz, L. 1835 B, 331.
1836 A, 150.
1844 D, 142 ("siluroïdes").
1845 C, 325 (Siluri).
1858 A, 9 ("catfish").
Aichel, O. 1919 A, 81 ("welse").
Allis, E. P. 1905 A, 420.
1909 A, 214.
1918 A, 242.
1922 B, 244.
Arldt, T. 1907 D, 681.
1912 A, 679.
1923 A, 510 ("siluriden").
Baraldi, G. 1877 A, 44 (Siluri).
Belling, D. E. 1912 A, 60 ("siluroiden").
Bliss, R. 1875 A, 386 ("siluroids").
Bonaparte, C. L. 1833 B, 1200.
1838 B, 131.
Boulenger, G. A. 1901 D, 131, 237.
1902 B, 301.
1904 A, 166.
1904 D, 586, 756.
1917 B, 329.
1918 B, 199 ("silurides").
Brauer, A. 1914 A, 284.
Bridge, T. W. 1878 A, 705 ("siluroids").
1896 A, 550.
Bridge and Haddon 1893 A, 65-333.
Carus, V. 1875 A, 556 (Siluroidei).
Collinge, W. E. 1895 B, 275.
Cope, E. D. 1871 T, 454.
Cunningham, J. T. 1912 A, 247, 258, 265.
Cuvier, G. 1805 A ("silures").
1815 A, 113 ("silures").
Davis, J. W. 1880 C, 67 ("siluroids").
Dean, Gudger, Henn 1923 A, 701.
Duméril, A. 1856 A, 471 ("siluroïdes").
Eastman, C. R. 1912 B, 372.
1917 A, 293.
Egerton, P. G. 1852 C, 6 L, 1 ("siluroids").
Eigenmann, C. H. 1890 B, 12.
Geoffroy-St. Hilaire, E. F. 1807 B, 426 ("silures").
1824 A, 132 ("silures").
1824 G, 439 (Silurus).
Gill, T. 1885 C, 115.
1905 C, 617 ("silurids").
Goetsch, W. 1915 A, 461 ("siluriden").
Goodrich, E. S. 1904 A, 474 ("siluroids").
1909 A, 379.
Günther, A. C. 1887 A, 67.
Hamburger, R. 1904 A, 75 ("siluroiden").
Heckel, J. 1850 B, 146 ("siluroiden").
Heilprin, A. 1887 A, 68, 80, 89.
Hoernes, R. 1886 A, 531 (Siluridei).
Hofer, B. 1890 A, 105 ("siluroiden").
Hoffmann, K. 1923 A, 113, fig. 1 (Silurus).
Huxley, T. H. 1859 H, 37 (Siluroidei).
1863 F, 427 ("siluroids").
Hyrtl, C. J. 1862 A, 95 ("siluroiden").
Ihering, H. 1891 C, 26 ("siluriden").
Jaeckel, O. 1904 A, 30 ("siluriden").
Jaquet, M. 1898 A, 101, 213, pls. i-xiii, xvi-xxii (Silurus).
1899 A, 177, pls. xxxiv-xl.
Jordan, D. S. 1885 A, 112.
1905 A, 11, 178, 592.
1907 B, 397.
1923 A, 147 (Siluridæ, Ameiuridæ).
Jordan and Gilbert 1882 A, 96.
Kindred, J. E. 1919 A.
1924 A, 423 ("siluroids").
Klein, E. F. 1879 A, 123.
1881 A, 330.
1884 A, 133, 135, 137, 138, 146, 156, 160, 201, 202, 244, 246, 248.
1885 A, 108, 121, 130, 142, 164, 192, 210.
1886 A, 227, 264, 289.
Kner, R. 1861 A, 308 (Siluroidei).
Köstlin, O. 1844 A ("siluroiden").
Koschkaroff, D. N. 1906 A, 211.
Leunis and Ludwig 1883 A, 720.
Leriche, M. 1900 A, 179.
1901 B, 165 ("siluridés").
Mayer, A. F. 1862 A, 108 (Silurus).
McMurrich, J. P. 1883 A, 629 ("siluroids").
Meckel, J. F. 1825 A ("siluren").
Meek, A. 1916 A, 169.
Müller, J. 1845 A, 96 ("siluroiden").
Neumayer, L. 1913 A, 251 ("siluriden").
Owen, R. 1845 B, 86 ("siluroids").
1848 B, 151, pl. i (Silurus).
1866 A, 193, 248.
Palacký, J. 1902 B, 141 ("siluriden").
Parker and Bettany 1877 A, 84 ("siluroids").
Peyer, B. 1919 A, 63 ("welse").
1920 B, 107 ("welse").
1922 A ("siluriden").
Priem, F. 1906 B, 277, figs. 46-48.
1908 B, 99 ("siluridés").
Rauther, M. 1913 A, 1101.
Reed, H. D. 1924 A, 431 ("siluroids").
Regan, C. T. 1911 G, 560 (Siluridæ); 562 (Amiuridæ).
1922 A, 203 (Siluridæ, Amiuridæ).
1924 A, 175 ("siluroids").
Reis, C. 1905 A, 220 ("siluroides").
Reynolds, S. H. 1897 A, 105, 554 ("siluroids").
Richardson, J. 1836 A, 132 (Siluroideæ).
Ridewood, W. G. 1904 B, 213 ("siluroids").
Sagemehl, M. 1883 A ("siluriden").
Scharff, R. F. 1911 A, 89 ("cat-fishes").
Schauinsland, H. 1906 A, 474 ("siluroiden").
Schelaputin, G. 1906 A, 85 (Clarias).
Schlosser, M. 1917 A, 142, 144 ("siluriden").
Shepherd, C. E. 1913 A, 140.
1916 A, 178.
Siebenrock, F. 1901 A, 108.
Sörensen, W. 1895 A, 399 (Siluroidæ).
Starks, E. C. 1905 A, 755 (Silurus).
Stensiö, E. A. 1925 A, 36 (Siluroidæ).
Storms, R. 1891 A, 118 ("siluroides").
Stromer, E. 1925 B, 364.
Terra, P. 1911 A, 212.
Thilo, O. 1879 A, 12, pl. i (Pimelodus).
1898 B, 89 ("siluroiden").
1908 A, 777, 788.

Tomes, C. S. 1878 A, 41 ("siluroids").
Uhlmann, E. 1921 A, 302, 333.
Vaillant, L. 1896 A, 275 ("siluroïdes").
Wagner, R. 1843 A (Silurus).
Wallace, A. R. 1876 A, ii, 441.
Weber, E. H. 1821 A, 1061 (Silurus).
Whitehouse, R. H. 1910 B, 600.
Wiedersheim, R. 1880 C, 128 ("siluroiden").
Woodward, A. S. 1901 A, x, 324.
Wright, R. R. 1885 A, 107.
Zittel and Koken 1911 A, 123.
Zittel and Schlosser 1923 A, 124.
Zittel and Woodward 1902 A, 101.

RHINEASTES Cope. Type *R. peltatus* Cope.

Hay, O. P. 1902 A, 382.
Arldt, T. 1923 A, 512 (Rhineaster).
Cockerell, T. D. A. 1908 C, 163.
Dall and Harris 1892 A, 289.
Eastman, C. R. 1917 A, 294.
Jordan, D. S. 1923 A, 146 (To Ariidae).
Lériche, M. 1901 B, 170.
Matthew, W. D. 1915 A, 298.
Regan, C. T. 1922 A, 206.
Seeley, H. G. 1886 A, 412.
Woodward, A. S. 1901 A, 329.
Zittel and Schlosser 1923 A, 124 (Rhineastes, Astephus).

Rhineastes arcuatus Cope.

Hay, O. P. 1902 A, 382.
Cockerell, T. D. A. 1908 C, 163.
Merrill, G. P. 1907 A, 16 (Pimelodus antiquus); 17 (R. arcuatus).
Woodward, A. S. 1901 A, 329.
Middle Eocene (Bridger); Wyoming.

Rhineastes calvus Cope.

Hay, O. P. 1902 A, 382.
Cockerell, T. D. A. 1908 C, 163.
Cope, E. D. 1874 B, 441.
Merrill, G. P. 1907 A, 17.
Regan, C. T. 1922 A, 206.
Woodward, A. S. 1901 A, 329.
Middle Eocene (Bridger); Wyoming.

Rhineastes pectinatus Cope.

Hay, O. P. 1902 A, 382.
Cockerell, T. D. A. 1906 A, 163.
1908 C, 163.
Merrill, G. P. 1907 A, 17.
Regan, C. T. 1922 A, 206.
Woodward, A. S. 1901 A, 329.
Miocene (Florissant); Colorado.

Rhineastes peltatus Cope.

Hay, O. P. 1902 A, 382.
Cockerell, T. D. A. 1908 C, 163.
Jordan, D. S. 1905 A, ii, 186.
1907 B, 405.
Merrill, G. P. 1907 A, 17.
Woodward, A. S. 1901 A, 329.
Middle Eocene (Bridger); Wyoming.

Rhineastes radulus Cope.

Hay, O. P. 1902 A, 382.
Cockerell, T. D. A. 1908 C, 163.
Merrill, G. P. 1907 A, 18.
Woodward, A. S. 1901 A, 330 (Rhineastes?).
Middle Eocene (Bridger); Wyoming.

Rhineastes rhæas Cope.

Hay, O. P. 1902 A, 382.
Lambe, L. M. 1904 C, 27, 38, 44.
1908 A, 9, 14, pl. i, figs. 10-16.
Woodward, A. S. 1901 A, 329 (Rhineastes?).
Oligocene; Assiniboia.

Rhineastes smithii Cope.

Hay, O. P. 1902 A, 382.
Cockerell, T. D. A. 1908 C, 163.
Merrill, G. P. 1907 A, 18.
Woodward, A. S. 1901 A, 330.
Middle Eocene (Bridger); Wyoming.

Rhineastes sp. indet.

Bowen, C. F. 1915 A, 118. Upper Cretaceous (Hell Creek); Montana.
Brown, B. 1907 A, 842. Upper Cretaceous (Hell Creek); Montana.

AMEIURUS Rafinesque. Type *Pimelodus cupreus* Raf. = *A. natalis* Le Sueur.

Unless otherwise indicated, the authors, as quoted, use the name *Amiurus*.
Hay, O. P. 1902 A, 382 (Ameiurus).
Allis, E. P. 1897 A, 15.
1898 A, 428.
1905 A, 402, 420 (Ameiurus).
1909 A, 213 (Ameiurus).
1915 A, 556 (Ameiurus).
1918 A, 242 (Ameiurus).
1919 C, 254 (Ameiurus).
1922 A, 153.
1922 B, 197.
1923 A, 43.
Arldt, T. 1907 D, 96.
1923 A, 512.
Braus, H. 1906 A, 184.
Bridge, T. W. 1896 A, 553.
1904 A, 730.
Bridge and Haddon 1893 A, 81, 112, 275, 289.
Collinge, W. E. 1895 B, 278, pl. xvii, figs. 2, 3.
Dall and Harris 1892 A, 289.
Dean, Gudger, Henn 1923 A, 668.
Duméril, A. 1856 A, 486 ("pimélode").
Eastman, C. R. 1917 A, 293 (Ameiurus).
Gill, T. 1885 C, 117.
Goodrich, E. S. 1909 A, 379.
Günther, A. C. 1887 A, 68.
Hague, F. 1924 A, 275 (Amiurus).
Heilprin, A. 1887 A, 68.
Hilgard, T. C. 1858 A, 91 (Pimolodus).
Jordan, D. S. 1885 A, 116 (Amiurus).
1905 A, ii, 180, 556 (Ameiurus).
1907 B, 399 (Ameiurus).
Jordan and Evermann 1917 A, 112 (Ameiurus).
Jordan and Gilbert 1882 A, 102.
Kindred, J. E. 1919 A, 1-104, pls. i-viii.
Kingsley, J. S. 1925 A, 91, 94, 95, 111, figs. 96, 99-101, 116, 251.

Kolzoff, N. K. 1896 A, 519.
Leriche, M. 1901 B, 170, 171.
Meek, A. 1916 A, 170, 171.
Moodie, R. L. 1915 J, 326.
1922 B, 322, fig. 2.
Norman, E. W. 1926 A, 402, fig. 50.
Peyer, B. 1922 A, 495, fig. 30.
Reed, H. D. 1924 A, 431, fig. 1.
Regan, C. T. 1922 A, 207.
Reis, C. 1905 A, 224, pl. vi.
Ryder, J. 1886 A, 73, 80.
Scharff, R. F. 1911 A, 89 (Ameiurus).
Schmalhausen, J. J. 1912 A, 549.
Starks, E. C. 1916 A, 21.
Wallace, A. R. 1876 A, ii, 442.
Woodward, A. S. 1901 A, 328.
Wright, R. R. 1885 A, 107, 110.

Ameiurus cancellatus Cope.

Hay, O. P. 1902 A, 383.
Lambe, L. M. 1904 C, 27, 38, 44 (Amiurus).
1908 A, 9, 15 (Amiurus).
Woodward, A. S. 1901 A, 328 (Amiurus).
Oligocene (White River): Assiniboia.

Ameiurus? decorus Hay.

Hay, O. P. 1924 A, 1, pl. i, fig. 1.
Upper Miocene (Fleming); Texas.

Ameiurus maconnellii Cope.

Hay, O. P. 1902 A, 383.
Lambe, L. M. 1904 C, 27, 44 (Amiurus).
1908 A, 9, 16 (Amiurus).
Oligocene (White River): Assiniboia.

Ameiurus nebulosus (Le Sueur).

Le Sueur, C. A. 1819, Mem. Mus., v, 149 (Pimelodus).
Hay, O. P. 1923 A, 311.
Jordan and Evermann 1896 A, 140.
Leidy, J. 1889 H, 19 (Amiurus atrarius).
Recent; Eastern United States: Pleistocene; Pennsylvania.

Ameiurus primævus Eastman.

Eastman, C. R. 1917 A, 293. Origin uncertain; probably from Eocene (Green River); Wyoming.

Ameiurus sp. indet.

Cope, E. D. 1883 L, 161. Pleistocene (Idaho); Idaho.
Hay, O. P. 1927 D, 265, 268.
Matthew, W. D. 1918 A, 188. Pliocene (Snake Creek); Nebraska.
1924 C, 68 (This genus?). Upper and Middle Miocene (Lower Snake Creek and Sheep Creek); Nebraska.

Order ANGUILLOMORPHI, new name.

Unless otherwise indicated, the writers, as cited, employ for this order the name *Apodes*.
Arldt, T. 1923 A, 514 ("apoden").
Bonaparte, C. L. 1831 A, 96.
Boulenger, G. A. 1904 A, 162, 167.
1904 D, 599.
Cockerell, T. D. A. 1913 B, 126 (Enchelycephali).
Cope, E. D. 1872 C, 334 (Enchelycephali).
Cunningham, J. T. 1912 A, 167 (Apoda).
Cuvier, G. 1814 A, 76 ("anguilles").
Dean, Gudger, Henn 1923 A, 669.
Dietz, P. A. 1917 A, 84.
Gill, T. 1872 C, 19.
1885 C, 100.
1909 B, 836.
1909 C, 789.
1910 C, 789.
Goodrich, E. S. 1909 A, 397, 403 (Anguilliformes).
Gregory, W. K. 1907 D, 450, 478.
Hasse and Schwarck 1870 A, 30 ("aale").
Jordan, D. S. 1885 A, 100.
Jordan, D. S. 1905 A, I, 611; II, 139.
1907 B.
1923 A, 129.
Jordan and Evermann 1896 A, 344.
Kesteven, H. L. 1926 A, 133.
Kner, R. 1861 A, 233.
Linnæus, C. 1758 A, 242, 244.
Meek, A. 1916 A, 148.
Moodie, R. L. 1909 D, 243 (Apoda).
Owen, R. 1866 A, 40.
Popta, Canna M.-L. 1904 A, 367 (Murænidæ).
Rauther, M. 1913 A, 1101.
Regan, C. T. 1909 B, 78 (Anguiloidei); 83 (Apodes).
1912 B, 839, 841, 843.
1912 D, 377.
Stannius, H. 1854 A.
Woodward, A. S. 1898 A, 119.
1901 A, 336.
Zittel and Koken 1911 A, 119.
Zittel and Schlosser 1923 A, 133 (Anguilliformes).

Suborder ARCHENCHELI Jordan.

Jordan, D. S. 1905 A, ii, 141.
Goodrich, E. S. 1909 A, 404.
Gregory, W. K. 1907 D, 481.
Jordan, D. S. 1905 A, ii, 141.
Jordan, D. S. 1907 B, 364.
1923 A, 139.
Norman, E. W. 1926 A, 369-464, fig. 1 (Anguilla).

ANGUILLAVIDÆ Hay.

Hay, O. P. 1903 I, 436.
Gregory, W. K. 1907 D, 480.
Jordan, D. S. 1923 A, 130.
Regan, C. T. 1909 B, 83.
1912 D, 379, 380 (Urenchelidæ).

ANGUILLAVUS Hay. Type *A. quadripinnis* Hay.

Hay, O. P. 1903 I, 437.
Arldt, T. 1923 A, 514.
Regan, C. T. 1912 D, 380.

Anguillavus hackberryensis Martin.

Martin, H. T. 1822 A, 95.
Cretaceous (Niobrara); Kansas.
A fish of doubtful relationship and not well illustrated.

Suborder COLOCEPHALI Cope.

Cope, E. D. 1871 T, 452, 456.
1872 C, 328, 334.
1891 N, 23.
Gill, T. 1872 C, 20.
1885 C, 101.
Goodrich, E. S. 1909 A, 407.
Gregory, W. K. 1907 D, 481.
Jordan, D. S. 1885 A, 101.
1905 A, II, 152.
1907 B, 371.
1921 A, 352.
1923 A, 133, 157.
Jordan and Evermann 1896 A, 346, 388.
Jordan and Gilbert 1882 A, 354.

MURÆNIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 96, 118.
Allis, E. P. 1907 A, 572.
1909 A, 214.
Arldt, T. 1907 D, 666.
Boulenger, G. A. 1904 A, 161.
1904 D, 604.
Cope, E. D. 1871 T, 456.
1872 C, 335.
1891 N, 23.
Dean, Gudger, Henn 1923 A, 690.
Facciola, L. 1901 A, 41 ("murenoidi").
Gill, T. 1872 C, 20.
1885 C, 107.
1890 B, 157.
1890 C, 165.
Goodrich, E. S. 1909 A, 408.
Gregory, W. K. 1907 D, 481.
Günther, A. C. 1870 A, 19.
1880 A, 669.
Hasse and Schwarck 1870 A, 46 (Muræna).
Huxley, T. H. 1859 D (Muræna).
Jordan, D. S. 1885 A, 107.
1905 A, II, 152.
1907 B, 371.
1921 A, 252.
1923 A, 133.
Jordan and Evermann 1896 A, 346, 388.
Jordan and Gilbert 1882 A, 355.
Kesteven, H. L. 1926 A, 133.
Klein, E. F. 1879 A, 69, 113 (Muræna).
1884 A.
1885 A.
1886 A.
Kner, R. 1861 A, 233 (Murænoidei).
Owen, R. 1845 B, 164, pl. lvi, figs. 4, 5 (Muræna).
1848 B, 91,108.
Popta, C. M. L. 1904 A, 367, figs.
Porta, A. 1905 A, 236 (Murænoidei).
Priem, F. 1914 B, 249 ("muræniде," "otolithus").
Regan, C. T. 1912 D, 379.
Sagemehl, M. 1883 A ("muræniden").
1884 A, 22 ("muræniden").
Schlosser, M. 1917 A, 142, 147 ("muræniden").
Stannius, H. 1854 A, 96 (Murænoidei).
Terra, P. 1911 A, 208.
Versluys, J. 1925 A, 166 ("murænen").
Woodward, A. S. 1901 A, 336.
Zittel, K. A. 1890 A, 285.
Zittel and Koken 1911 A, 127.
Zittel and Schlosser 1923 A, 133.

DEPRANDUS Jordan and J. Z. Gilbert. Type *D. lestes* Jordan and Gilbert.

Jordan and Gilbert, in Jordan, D. S. 1921 A, 252.
Jordan, D. S. 1923 A, 134.

Deprandus lestes Jordan and Gilbert.

Jordan and Gilbert, in Jordan, D. S. 1921 A, 252, pl. ix, fig. *b;* pl. xxx, fig. *b.*
Jordan, D. S. 1924 B, 49, pl. L.
Miocene (Monterey); California.

DERRHIIDÆ Jordan.

Jordan, D. S. 1925 B, 15.

DERRHIAS Jordan. Type *D. enantius* Jordan.

Jordan, D. S. 1925 B, 15.
The relationships of the genus *Derrhias* are regarded by Jordan as forming a distinct puzzle.

Derrhias enantius Jordan.

Jordan, D. S. 1925 B, 15, pls. v, vi.
Miocene (Monterey); California.

Order ISOSPONDYLI Cope.

Hay, O. P. 1902 A, 383.
Agassiz, L. 1835 I, 99 ("cycloidians").
1840 C, 98 ("cycloïdes").
1844 D, 139 ("cycloïdes").
1844 E, 332 ("cycloids").
1845 C, 323 ("cycloids").
Boulenger, G. A. 1902 C, 389.
1904 D, 543 (Malacopterygii).
Cockerell, T. D. A. 1913 B, 122.
Cope, E. D. 1871 T, 452.
1891 N, 22, 23.
Dean, Gudger, Henn 1923 A, 625.
Dietz, P. A. 1917 A, 83 ("physostomen").
Eastman, C. R. 1905 A, 56.
1908 A, 64.
1912 A, 228.
Fowler, H. W. 1911 A, 151.
Gill, T. 1885 C, 134.
Goodrich, E. S. 1904 A, 494.
1909 A, 386 (Clupeiformes).
Gregory, W. K. 1907 D, 449, 467.
1923 A, 238.
Hubbs, C. L. 1919 B, 61, 63.
Jordan, D. S. 1885 A, 134.
Jordan, D. S. 1904 A, 598.
1905 A, II, 37, 576.
1907 B, 264, 265, 761.
1923 A, 116.
Jordan and Gilbert 1882 A, 256.
Klein, E. F. 1884 A, 130, 135, 145, 156 (Physostomi).
Müller, J. 1846 C, (Physostomi, in part).
Parker and Haswell 1897 A, 204 (Physostomi, part).
Regan, C. T. 1909 B, 77, 82.
1923 B, 460.
Ridewood, W. G. 1904 A, 57 ("isospondylous fishes").
Schlesinger, G. 1909 A, (147, 151) (Isospondili).
Starks, E. C. 1904 C, 254.
Stensiö, E. A. 1925 A, 120.
Traquair, R. H. 1900 C, 508.
Woodward, A. S. 1901 A, vi, 1.
1906 C, 281.
1922 C, 94.
Zittel and Koken 1911 A, 118 (Physostomi).
Zittel and Schlosser 1923 A, 124 (Physostomi, in part).

Suborder CLUPEIFORMES Goodrich.

Goodrich, E. S. 1909 A, 386.
Jordan, D. S. 1923 A, 119 (Clupeioidei).
Zittel and Schlosser 1923 A, 124.

Superfamily PHOLIDOPHOROIDÆ, new form.

Gregory, W. K. 1923 A, 238 (Pholidophoroidea).
Jordan, D. S. 1923 A, 116 (Pholidophoroidei).
Regan, C. T. 1923 B, 459 (Halecostomi).

PHOLIDOPHORIDÆ Woodward.

Woodward, A. S. 1890 D, 43.
Hay, O. P. 1902 A, 383.
Abel, O. 1906 C, 84.
1919 A, 208.
1922 A, 77.
Arldt, T. 1923 A, 496 ("pholidophoriden").
Boulenger, G. A. 1904 A, 163.
1904 D, 545.
Deecke, W. 1926 A, 188 ("pholidophoriden").
Goodrich, E. S. 1904 A, 494.
1909 A, 336.
1913 A, 80.
Gregory, W. K. 1923 A, 238, 241.
Jordan, D. S. 1905 A, ii, 26, 586.
1907 B, 761.
Jordan, D. S. 1923 A, 116.
Meek, A. 1916 A, 62.
Priem, F. 1908 B ("pholidophoridés").
Regan, C. T. 1910 A, 354.
1923 B, 458.
Schlosser, M. 1917 A, 135, 136, 138 ("pholidophoriden").
Stensiö, E. A. 1925 A, 119 ("pholiphorids").
Stolley, E. 1920 A, 76, 79.
Traquair, R. H. 1900 C, 508.
Vetter, B. 1881 A, 55 (Pholidophori).
Woodward, A. S. 1915 B, lxxiv.
Zittel and Koken 1911 A, 110.
Zittel and Schlosser 1923 A, 111.
Zittel and Woodward 1902 A, 84.

PHOLIDOPHORUS Agassiz. Type *P. macrocephalus* Agassiz.

Hay, O. P. 1902 A, 383.
Abel, O. 1919 A, 211, fig. 165.
1921 A, 211, fig. 72.
Agassiz, L. 1832 A, 145.
1833 A, 475.
1844 C, 265.
Alessandri, G. 1910 A, 125.
Arldt, T. 1923 A, 496.
Bronn, H. G. 1848 B, 967.
1849 A, 660.
Cross, W. 1908 A, 107.
Cross and Howe 1905 A, 486.
Deecke, W. 1913 A, 80, 81.
Eastman, C. R. 1917 A, 278.
Egerton, P. G. 1852 C, 6 E, 1, pls. iv, v.
1855 A, 8 E, 1, pls. iv, vii.
Giebel, C. G. 1855 A, 113.
Goodrich, E. S. 1908 A, 769.
Heckel, J. J. 1850 A, 361, 365.
Hussakof, L. 1916 C, 348.
Jordan, D. S. 1905 A, II, 28, 586.
Jordan and Evermann 1917 A, 140.
Klaatsch, H. 1890 A, 144.
Lütken, C. 1868 C.
Meek, A. 1916 A, 63.
Priem, F. 1908 B, 16, pl, i, fig. 3.

Priem, F. 1912 B, 251.
Ridewood, W. G. 1904 A, 69.
Scupin, H. 1896 A, 169, pl. x, fig. 4.
Steinmann, G. 1907 A, 413.
1927 A, 13.
Stolley, E. 1920 A, 76.
Stromer, E. 1925 B, 358.
Traquair, R. H. 1911 A, 43.
Vetter, B. 1881 A, 58-72.
Winckler, T. C. 1871 B, 184.
Woodward, A. S. 1891 G, 545.
1897 E, 150, pl.
1906 C, 280.
Woodward, A. S. 1919 A (1918), 101, pl. xx; text-fig. 34.
Zittel and Koken 1911 A, 110.
Zittel and Schlosser 1923 A, 111, figs. 191, 192.
Zittel and Woodward 1902 A, 85.

Pholidophorus americanus Eastman.

Hay, O. P. 1902 A, 383.
Gilmore, C. W. 1905 A, 80.
Jordan, D. S. 1905 A, ii, 28.
Merrill, G. P. 1907 A, 15.
Sauvage, H. E. 1900 B, 116.
Jurassic ("basal"); South Dakota.

LEPTOLEPIDÆ.

Arldt, T. 1923 A, 497 ("leptolepididen").
Boulenger, G. A. 1904 A, 163.
Bridge, T. W. 1904 A, 546.
Cockerell, T. D. A. 1919 A, 173.
Goodrich, E. S. 1909 A, 371.
Jordan, D. S. 1905 A, ii, 41.
1907 B, 268.
1923 A, 117.
Nicholson and Lydekker 1889 A, 990 (Leptolepididæ).
Woodward, A. S. 1895 A, 500.
1898 B, 115.
1915 B, lxxiv.
Zittel and Broili 1911 A, 119.
Zittel, Eastman, etc. 1902 A, 93.
Zittel and Koken 1911 A, 119.
Zittel and Schlosser 1923 A, 122.

THRISSOPS Agassiz. Type *T. formosus* Agassiz.

Agassiz, L. 1843 B (1833), ii, pt. 1, 12.
Goodrich, E. S. 1909 A, 371.
Jordan, D. S. 1905 A, ii, 42.
Nicholson and Lydekker 1889 A, 990.
Woodward, A. S. 1895 A, 521.
1898 B, 116.
Zittel, K. A. 1890 A, 272, figs. 280, 281.
Zittel, Eastman, etc. 1902 A, 94.
Zittel and Koken 1911 A, 120, figs. 222, 223.
Zittel and Schlosser 1923 A, 122, figs. 215, 216.

Thrissops sp. indet.

Felix, J. 1891 A, 194, pl. xxx, fig. 10. Lower Cretaceous (Neocomian); Mexico.

Superfamily ELOPOIDÆ, new form.

GANOLYTIDÆ Jordan.

Jordan, D. S. 1921 A, 241.
Jordan, D. S. 1923 A, 118.

ETRINGUS Jordan. Type *E. scintillans* Jordan.

Jordan, D. S. 1907 A, 121.
Arldt, T. 1923 A, 497.
Hubbs, C. L. 1924 A, 177.
Jordan, D. S. 1919 A, 5.
1921 A, 241.
Jordan, D. S. 1919 A, 5, pl. i; pl. iii, fig. 1.
1921 A, 241.
Miocene? (Soledad); California.

Etringus scintillans Jordan.

Jordan, D. S. 1907 A, 121, fig. 17 (not figs. 18, 19).

Etringus sp. indet.

Jordan, D. S. 1907 A, 124. Miocene; California.

GANOËSSUS Jordan. Type *Ganolytes clepsydra* Jordan and Gilbert.

Jordan, D. S. 1920 C, 571.
1921 A, 241.
Jordan, D. S. 1920 C, 571.
1921 A, 241, pl. xvi.
1925 B, 8, 49.
Miocene (Monterey); California.

Ganoëssus clepsydra (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 23, pl. xi, fig. 1 (Ganolytes).

GANOLYTES Jordan. Type *G. cameo* Jordan.

Jordan, D. S. 1919 A, 5, 6.
Hubbs, C. L. 1924 A, 178.
Jordan, D. S. 1921 A, 241.

Ganolytes cameo Jordan.

Jordan, D. S. 1919 A, 5, 6, pl. ii, fig. 3; pl. iv, figs. 1, 2.
Jordan, D. S. 1907 A, 121, figs. 18, 19 (Etringus scintillans?).

Jordan, D. S. 1921 A, 241, pl. xv.
1925 B, 49.

Jordan and Gilbert 1919 A, 24.
Miocene? (Soledad); California.

PACHYRHIZODONTIDÆ Cope.

Hay, O. P. 1902 A, 387.
Boulenger, G. A. 1904 D, 569.
Fowler, H. W. 1911 A, 151 (Rhaphiosauridæ).

Jordan, D. S. 1905 A, ii, 44.
1907 B, 271, 761.
1923 A, 118 (Raphiosauridæ).

PACHYRHIZODUS Dixon. Type *P. basalis* Dixon.

Dixon, F. 1850, Geol. Sussex, 374.
Hay, O. P. 1902 A, 387.
Agassiz, L. 1843 B, (1835) IV, 35 (Megalodon, in part).
1843 B, (1837) Feuill., 104 (Hypsodon, in part).
Boulenger, G. A. 1904 D, 569.
Cockerell, T. D. A. 1919 A, 173, 174.
Cope, E. D. 1880 U, 147.
Dollo, L. 1892 F, 181.
Fowler, H. W. 1911 A, 152 (Syn. of *Raphiosaurus* Owen).
Hay, O. P. 1903 A, 29, 59.
Hennig, E. 1912 A, 490.
Jordan, D. S. 1919 B, 246.
1925 A, 219, 220.
Krause, P. G. 1901 A, 120.
Mason, J. W. 1869, Quart. Jour. Geol. Soc. Lond., xxv, 444 (*Acrodontosaurus*).
Owen, R. 1842 Trans. Geol. Soc. Lond. (2), VI, 413 (Raphiosaurus, type *R. subulidens* Owen= Pachyrhizodus?).
Schlosser, M. 1901 L, 480.
Storms, R. 1891 A, 151, 152.
Woodward, A. S. 1889 J, 351 (Pachyrhizodus, Raphiosaurus).
1898 B, 118.
1901 A, 8, 37.
1912 A (1907), 123, pls. xxv, xxvi; (1908), 129, pls. xxvii, xxviii; text-fig. 29.
Zittel and Koken 1911 A, 125.
Zittel and Schlosser 1923 A, 129.

Pachyrhizodus caninus Cope.

Hay, O. P. 1902 A, 387.
1903 A, 60, pl. iii, figs. 1, 2; text-figs. 44, 45.
Hussakof, L. 1908 A, 85.
Priem, F. 1908 B, 66.
Woodward, A. S. 1901 A, 44.
Zittel and Schlosser 1923 A, 129, fig. 226.
Upper Cretaceous (Niobrara); Kansas: Cretaceous; France.

Pachyrhizodus curvatus Loomis.

Hay, O. P. 1902 A, 388.
Woodward, A. S. 1901 A, 44.
Upper Cretaceous (Niobrara); Kansas.

Pachyrhizodus kingii Cope.

Hay, O. P. 1902 A, 388.
Woodward, A. S. 1901 A, 42 (Syn. of P. latimentum).
Upper Cretaceous (Niobrara); Kansas.

Pachyrhizodus latimentum Cope.

Hay, O. P. 1902 A, 388.
Woodward, A. S. 1901 A, 42.
Upper Cretaceous (Niobrara); Kansas.

Pachyrhizodus leptognathus Stewart.

Hay, O. P. 1902 A, 388.
Woodward, A. S. 1901 A, 45.
Upper Cretaceous (Niobrara); Kansas.

Pachyrhizodus leptopsis Cope.

Hay, O. P. 1902 A, 388.
1903 A, 64.
Hussakof, L. 1908 A, 85.
Woodward, A. S. 1901 A, 45.
Upper Cretaceous (Niobrara); Kansas.

Pachyrhizodus minimus Stewart.

Hay, O. P. 1902 A, 388.
Sauvage, H. E. 1899 C, 150.
Schlosser, M. 1901 L, 480.
Woodward, A. S. 1901 A, 45.
Upper Cretaceous (Niobrara); Kansas.

Pachyrhizodus velox Stewart.

Hay, O. P. 1902 A, 388.
Woodward, A. S. 1901 A, 45.
Upper Cretaceous (Niobrara); Kansas.

Pachyrhizodus sp. indet.

Lambe, L. M. 1914 H, 402. Upper Cretaceous (Niobrara); Wyoming.

ORICARDINUS Cope. Type *O. tortus* Cope.

Hay, O. P. 1902 A, 388.
Hennig, E. 1912 A, 490.
Zittel and Koken 1911 A, 125.

Oricardinus sheareri Cope.

Hay, O. P. 1902 A, 388.
1903 A, 64, text-fig. 46.
Hussakof, L. 1908 A, 84.

Woodward, A. S. 1901 A, 45 (Pachyrhizodus).
Cretaceous (Niobrara); Kansas.

Oricardinus tortus Cope.

Hay, O. P. 1902 A, 388.
1903 A, 65, text-figs. 47, 48, 49?.
Hussakof, L. 1908 A, 84.
Woodward, A. S. 1901 A, 46.
Cretaceous (Niobrara); Kansas.

CONOSAURUS Gibbes. Type *C. bowmani* Gibbes.

Hay, O. P. 1902 A, 388.
Fowler, H. W. 1911 A, 152.

Conosaurus bowmani Gibbes.

Hay, O. P. 1902 A, 388.
Fowler, H. W. 1911 A, 152, fig. 93.
Woodward, A. S. 1901 A, 612 (Conosaurops).
Upper Cretaceous (Greensand); South Carolina, New Jersey: Eocene?; South Carolina.

ELOPIDÆ Richardson.

Richardson, J. 1856 A, 251.
Arldt, T. 1912 A, 762.
1923 A, 497 ("elopiden").
Boulenger, G. A. 1901 D, 46.
1904 D, 544, 546.
Cockerell, T. D. A. 1913 B, 122.
1919 A, 173, 174.
Cope, E. D. 1871 T, 455.
Dean, Gudger, Henn 1923 A, 594, 625.
Gill, T. 1885 C, 137.
1905 F, 31.
Goodrich, E. S. 1909 A, 387.
Heckel, J. J. 1856 A, 250.
Jaekel, O. 1911 A, 89.
Jordan, D. S. 1885 A, 137.
1921 A, 242.
1923 A, 117.
Jordan and Evermann 1896 A, 407.
Jordan and Gilbert 1882 A, 260.
Moodie, R. L. 1911 G, 282.
Owen, R. 1848 B, 69 (Elops).
Regan, C. T. 1910 A, 254.
1923 B, 457.
Ridewood, W. G. 1904 A, 35, 37.
Schlosser, M. 1917 A, 139, 140, 148 ("elopiden").
Shepherd, C. E. 1914 A, 263.
Stromer, E. 1912 A, 33.
Woodward, A. S. 1898 B, 117.
1901 A, vi, 7.
1912 A, (1907), 112.
Zittel, K. A. 1890 A, 278 (Elopina).
Zittel, Eastman, etc. 1902 A, 94.
Zittel and Koken 1911 A, 124.
Zittel and Schlosser 1923 A, 129.

HOLCOLEPIS Marck. Type *Rhabdolepis cretaceus* Marck.

Marck, W. 1868, Palaeontogr., xv, 278 (To replace *Rhabdolepis*, preoccupied).
Cockerell, T. D. A. 1919 A, 173.
Marck, W. 1863 A, 26 (Rhabdolepis).
Jordan, D. S. 1905 A, i, 454, fig. 265; ii, 43.
1907 B, 270, fig. 201.
1919 B, 339, 352.
Woodward, A. S. 1901 A, 11.

Holcolepis delicatus Cockerell.

Cockerell, T. D. A. 1919 A, 175, pl. xxxi, fig. 5.
Upper Cretaceous (Mowry); Wyoming.

Holcolepis obliquus Cockerell.

Cockerell, T. D. A. 1919 A, 175.
Upper Cretaceous (Mowry); Yyoming.

Holcolepis pulchellus Cockerell.

Cockerell, T. D. A. 1919 A, 174, pl. xxi, figs. 3, 4.
Upper Cretaceous (Niobrara or Benton); Colorado.

Holcolepis transversus Cockerell.

Cockerell, T. D. A. 1919 A, 175, pl. xxxi, figs. 6-13.
Upper Cretaceous (Mowry); Wyoming: (Benton); Colorado.

Holcolepis sp. indet.

Cockerell, T. D. A. 1919 A, 175, pl. xxxii, fig. 2 (Colorado beds); Wyoming.
Reeside, J. B. 1924 A, 12, pl. iii. Upper Cretaceous (Mancos); New Mexico.

HELMINTHOLEPIS Cockerell. Type *H. vermiculatus* Cockerell.

Cockerell, T. D. A. 1919 A, 176.

Helmintholepis vermiculatus Cockerell.

Cockerell, T. D. A. 1919 A, 176, pl. xxxii, fig. 4.
Upper Cretaceous (Fox Hills); Colorado.

ECTASIS Jordan and Gilbert. Type *E. proriger* Jord. and Gilbert.

Jordan and Gilbert 1919 A, 62.
Hubbs, C. L. 1924 A, 178.
Jordan, D. S. 1921 A, 242.

Ectasis proriger Jordan and Gilbert.

Jordan and Gilbert 1919 A, 62.
Jordan, D. S. 1921 A, 242, pl. xvii, fig. *a*.
Upper Pliocene; California.

SPANIODONTIDÆ Jordan.

Jordan, D. S. 1905 A, ii, 43.
Jordan, D. S. 1923 A, 117 (To Elopidæ).

SPANIODON Pictet. Type *S. blondelii* Pictet.

Hay, O. P. 1902 A, 391.
Cope, E. D. 1880 U, 147.
Davis, J. W. 1887 C, 593 (Lewisia, type *L. ovalis* Davis).
Hay, O. P. 1903 G, 694.
Hennig, E. 1912 A, 490.
Jordan, D. S. 1923 A, 117.
Woodward, A. S. 1901 A, 48.

Zittel and Koken 1911 A, 125.
1923 A, 129.

Spaniodon simus Cope.

Hay, O. P. 1902 A, 391.
Cockerell, T. D. A. 1919 A, 173.
Hay, O. P. 1903 A, 47, pl. iv, figs. 1, 2.
Hussakof, L. 1908 A, 101.
Woodward, A. S. 1901 A, 53.
Cretaceous (Niobrara); South Dakota.

THRISSOPATER Günther. Type *T. salmoneus* Günther.

Günther, A. C. 1872, figs. Descrip. Brit. Org. Remains, dec. xiii.
Boulenger, G. 1904 D, 562.
Jordan, D. S. 1905 A, ii, 43.
Moodie, R. L. 1911 G, 231.
Woodward, A. S. 1901 A, 32.
1912 A (1908), 136.

Thrissopater intestinalis Moodie.

Moodie, R. L. 1911 G, 281; pl. lxi.
1913 A, 249.
Upper Cretaceous (Niobrara); Texas.

Superfamily ALBULOIDÆ, new name.

PELYCORAPIDÆ Cragin.

Cragin, F. W. 1901 A, 31 (Pelecorapidæ); 25 (Syllæmidæ).
Jordan, D. S. 1925 A, 229, 230 (Syllæmidæ).

SYLLÆMUS Cope. Type *S. latifrons* Cope.

Hay, O. P. 1902 A, 399.
Boulenger, G. A. 1904 D, 565 (Scyllæmus).
Cockerell, T. D. A. 1919 A, 185.
Cragin, F. W. 1901 A, 26.
Goodrich, E. S. 1909 D, 393 (Scyllæmus).
Jordan, D. S. 1925 A, 229.
Woodward, A. S. 1901 A, xi, 350.
1912 A (1903), 88, pls. xx, xxi.

Syllæmus latifrons Cope.

Hay, O. P. 1902 A, 399.
Cockerell, T. D. A. 1908 C, 176.
1914 A, 190.
1919 A, 180.
Cragin, F. W. 1901 A, 27, pl. i, figs.
Cope, E. D. 1877 K, 27, pl. xxiii, fig. 1.
Jordan, D. S. 1905 A, ii, 224.
1907 B, 439.
Merrill, G. P. 1907 A, 20.
Woodward, A. S. 1901 A, 351, 614.
Cretaceous?; New Mexico.

APSOPELIX Cope. Type *A. sauriformis* Cope.

Hay, O. P. 1902 A, 390.
Cockerell, T. D. A. 1919 A, 171, 172, 185.
Jordan, D. S. 1925 A, 229.
Woodward, A. S. 1901 A, 353.

Apsopelix sauriformis Cope.

Hay, O. P. 1902 A, 390.
Cockerell, T. D. A. 1919 A, 185.
Cope, E. D. 1874 B, 431.
Hussakof, L. 1908 A, 62.
Jordan, D. S. 1925 A, 230, pl. xx.
Cretaceous (Benton); Kansas.

PELYCORAPIS Cope. Type *P. varius* Cope.

Cope, E. D. 1874 C, 39 (Pelecorapis, lapsu calami).
Hay, O. P. 1902 A, 399 (Pelecorapis).
Cockerell, T. D. A. 1919 A, 185, 187.
Cragin, F. W. 1901 A, 31, (Pelecorapis).
Jordan, D. S. 1923 A, 157 (Pelycorapis).
1925 A, 229 (Pelocorapis).
Woodward, A. S. 1901 A, 354 (Pelycorapis).

Pelycorapis berycinus (Cope).

Hay, O. P. 1902 A, 399 (Pelecorapis).
Cockerell, T. D. A. 1908 C, 176 (Pelecorapis).
1919 A, 187 (Pelecorapis).
Hussakof, L. 1908 A, 86, fig. 44 (Pelecorapis).
Woodward, A. S. 1901 A, 354.
Upper Cretaceous (Pierre?); Montana?.

Pelycorapis microlepis Cragin.

Cragin, F. W. 1901 A, 35, pl. ii, fig. 3 (Pelecorapis).
Upper Cretaceous (Benton); Kansas.

Pelycorapis varius Cope.

Hay, O. P. 1902 A, 399.
Cockerell, T. D. A. 1919 A, 171, 187.
Cope, E. D. 1874 B, 431 (P. varians).
Cragin, F. W. 1901 A, 32, pl. ii, figs. 1, 2.
Hussakof, L. 1908 A, 87.
Woodward, A. S. 1901 A, 354.
Cretaceous (Benton); Kansas.

LEPTICHTHYS Stewart. Type *L. agilis* Stewart.

Hay, O. P. 1902 A, 392.
Jordan, D. S. 1925 A, 229.

Leptichthys agilis Stewart.

Hay, O. P. 1902 A, 392.
Jordan, D. S. 1925 A, 231, pl. xxi.
Woodward, A. S. 1901 A, 614, 616.
1912 A, (1903), 88.
Upper Cretaceous (Niobrara); Kansas.

ALBULIDÆ Cope.

Cope, E. D. 1871 T, 455.
Hay, O. P. 1902 A, 390.
Allis, E. P. 1909 A, 213 (Albula).
Arldt, T. 1923 A, 497.
Boulenger, G. A. 1904 A, 164.
1904 D, 547.
Cockerell, T. D. A. 1913 B, 122.
1919 A, 172.
Cope, E. D. 1872 C, 329, 333.
Dean, Gudger, Henn 1923 A, 594, 625.
Dietz, P. A. 1917 A, 84.
Frost, G. A. 1925 A, 155, pl. xi (Albula).
Gill, T. 1885 C, 137.
1905 F, 40, pls. xvii, xviii, xxi; text-figs. 5-7.
Goodrich, E. S. 1909 A, 387.
Gregory, W. K. 1907 D, 469.
Hubbs, C. L. 1919 B, 63 (Albula).
Jordan, D. S. 1885 A, 137.
1905 A, ii, 44, 556.
1907 B, 271, 761.
Jordan, D. S. 1923 A, 118.
Jordan and Evermann 1896 A, 410.
Jordan and Gilbert 1882 A, 258.
Klaatsch, H. 1890 A, 168, pl. vii (Albula).
Meek, A. 1916 A, 63.
Priem, F. 1908 B, 81 (Albula).
Rauther, M. 1913 A, 1100.
Regan, C. T. 1910 A, 357.
Ridewood, W. G. 1904 A, 35, 47.
1904 B, 213.
1905 C, 272.
Schlosser, M. 1917 A, 140, 143.
Shepherd, C. E. 1914 A, 264.
Starks, E. C. 1916 A, 14 (Albula).
Woodward, A. S. 1899 C, 361.
1901 A, vi, 4, 59.
1923 B, 297.
Zittel and Koken 1911 A, 121.
Zittel and Schlosser 1923 A, 126.
Zittel and Woodward 1902 A, 94.

CYCLOIDES Winckler. Type *C. incisus* Winckler.

Winckler, T. C. 1876 A, 3, pl. i, fig. 2.
Cockerell, T. D. A. 1919 A, 173.
Jordan, D. S. 1919 B, 398.

Cycloides? incertus Cockerell.

Cockerell, T. D. A. 1919 A, 173, pl. xxxi, fig. 2.
Upper Cretaceous (Mesa Verde); Wyoming.

PETALOLEPIS Steinla. Type *Osmeroides divaricatus* Geinitz.

Steinla, M. 1868, in Geinitz, H. B. 1868 A, 42, pl. ii, fig. 18 (As syn. of Osmeroides).
Jordan, D. S. 1919 B, 350.

Petalolepis? fibrillatus Cockerell.

Cockerell, T. D. A. 1919 A, 172, pl. xxxi, fig. 1.
Upper Cretaceous (Mesa Verde); Wyoming.

CYCLOTOMODON Cope. Type *C. vagrans* Cope.

Hay, O. P. 1902 A, 390.

Cyclotomodon vagrans Cope.

Hay, O. P. 1902 A, 390.
Woodward, A. S. 1901 A, 45.
Phosphate beds; South Carolina.

ANOGMIIDÆ Jordan.

Jordan, D. S. 1925 A, 219.

ANOGMIUS Cope. Type *A. contractus* Cope.

Cope, E. D. 1871 J, 170.
Hay, O. P. 1902 A, 393.
Arldt, T. 1923 A, 497.
Cockerell, T. D. A. 1919 A, 172.
Cope, E. D. 1877 G, 584.
Hay, O. P. 1903 A, 26, text-figs. 15-17, 33-36 (This genus?).
Hennig, E. 1912 A, 490.
Jordan, D. S. 1919 B, 360, 388.
1925 A, 219 (Thryptodus, Pseudothryptodus, syns.?).
Schlosser, M. 1901 L, 480.
Woodward, A. S. 1901 A, 71, foot-note.
1912 A (1907), 105.
1923 B, 297, fig. 1.
Zittel and Koken 1911 A, 124.
Zittel and Schlosser 1923 A, 129.
This genus may be identical with Pachyrhizodus.

Anogmius contractus Cope.

Hay, O. P. 1902 A, 393 (A. contractus, A. aratus).
1903 A, 28 (A. contractus); 34, pl. ii, text-figs. 23-26 (A. aratus).
Hussakof, L. 1908 A, 61, fig. 30.
Jordan, D. S. 1925 A, 219, 220 (A. aratus, a syn.).
Woodward, A. S. 1901 A, 71 (A. contractus); 72 (A. aratus).
1912 A (1907), 105, fig. 33.
1923 B, 298.
Zittel and Koken 1911 A, 124, fig. 231 (A. aratus).
Zittel and Schlosser 1923 A, 128, fig. 25 (A. aratus).
Upper Cretaceous (Niobrara); Kansas.

Anogmius evolutus Cope.

Hay, O. P. 1902 A, 393.
1903 A, 46, text-fig. 37.
Hussakof, L. 1908 A, 62.
Jordan, D. S. 1925 A, 220, 221.
Woodward, A. S. 1901 A, 72 (Anogmius); 386 (Beryx multidentatus).
Upper Cretaceous (Niobrara); Kansas.

Anogmius favirostris Cope.

Hay, O. P. 1902 A, 393.
1903 A, 30, text-figs. 18-21.
Hussakof, L. 1908 A, 62.
Jordan, D. S. 1925 A, 220.
Woodward, A. S. 1901 A, 73.
Upper Cretaceous (Niobrara); Kansas.

Anogmius intermedius (Loomis).

Hay, O. P. 1902 A, 393.
Jordan, D. S. 1925 A, 219.
Woodward, A. S. 1901 A, 85 (Pseudothryptodus).
Upper Cretaceous (Niobrara); Kansas.

Anogmius polymicrodus (Stewart).

Hay, O. P. 1902 A, 393.
Cockerell, T. D. A. 1919 A, 179.
Hay, O. P. 1903 A, 35.
Jordan, D. S. 1925 A, 219, 220, pl. xiii.
Lambe, L. M. 1914 H, 402.
Sauvage, H. E. 1901 A, 6.
Schlosser, M. 1901 L, 479.
Woodward, A. S. 1901 A, 72.
Upper Cretaceous (Niobrara); Kansas.

Anogmius sp. indet.

Hay, O. P. 1903 A, 27, 30, 44, figs. 15, 17, 33, 34. Upper Cretaceous (Niobrara); Kansas.
Hussakof, L. 1908 A, 62. Upper Cretaceous (Niobrara); Kansas.

PLETHODONTIDÆ Woodward.

Woodward, A. S. 1912 A (1907), 105.
Hay, O. P. 1902 A, 393 (Osteoglossidæ, in part).
Cockerell, T. D. A. 1919 A, 172, 179.
Hay, O. P. 1903 A, 26 (Plethodidæ).
Jordan, D. S. 1905 A, ii, 44 (Thryptodontidæ).
1907 B, 271 (Thryptodontidæ).
1923 A, 119 (Thryptodontidæ).
Jordan, D. S. 1925 A, 220 (Anogmiidæ?).
Loomis, F. B. 1900 A, 229, 233 (Plethodidæ).
Schlosser, M. 1917 A, 140 ("plethodiden").
Woodward, A. S. 1899 C, 353, pls. xiii, xiv (Plethodus).
Zittel and Koken 1911 A, 124 (Plethodidæ).
Zittel and Schlosser 1923 A, 128 (Plethodidæ).

THRYPTODUS Loomis. Type *T. zitteli* Loomis.

Hay, O. P. 1902 A, 393 (Anogmius).
Andreae, A. 1904 A, 309.
Cockerell, T. D. A. 1919 A, 179 (Plethodus).
Jordan, D. S. 1905 A, ii, 44 (Thryptodus, Plethodus).
1907 B, 271 (Thryptodus, Plethodus).
1920 C, 490 (Type "Plethodus zitteli Loomis").
1925 A, 219 (Tyryptodus).
Storms, R. 1891 A, 151 (Plethodus).
Woodward, A. S. 1899 C, 353, pls. xiii, xiv (Plethodus).
1901 A, 85.
1912 A (1907), 107, pl. xxii (Thryptodus, a syn. of Plethodus).
Zittel and Koken 1911 A, 124 (Plethodus).
Zittel and Schlosser 1923 A, 129 (Thryptodus, Plethodus).

Thryptodus rotundus Loomis.

Hay, O. P. 1902 A, 393 (Anogmius).
Woodward, A. S. 1901 A, 85.
Upper Cretaceous (Niobrara); Kansas

Thryptodus zitteli Loomis.

Hay, O. P. 1902 A, 393 (Anogmius).
1903 A, 38, 41, 42.
Jordan, D. S. 1920 C, 490.
1925 A, 219.
Woodward, A. S. 1901 A, 85.
Upper Cretaceous (Niobrara); Kansas.

SYNTEGMODUS Loomis. Type *S. altus* Loomis.

Hay, O. P. 1902 A, 390.
Jordan, D. S. 1905 A, ii, 45.
1907 B, 271.
Woodward, A. S. 1901 A, 84 (Syn. of Plethodus).
Zittel and Koken 1911 A, 124.
Zittel and Schlosser 1923 A, 129.

Syntegmodus altus Loomis.

Hay, O. P. 1902 A, 390.
1903 A, 41, text-figs. 27?-33? (Anogmius).
Hussakof, L. 1908 A, 61 (Anogmius. This species?).
Jordan, D. S. 1905 A, ii, 44.
Woodward, A. S. 1901 A, 84.
Upper Cretaceous (Niobrara); Kansas

NIOBRARIDÆ Jordan.

Jordan, D. S. 1925 A, 222.

NIOBRARA Jordan. Type *N. encarsia* Jordan.

Jordan, D. S. 1925 A, 222.

Niobrara encarsia Jordan.

Jordan, D. S. 1925 A, 223, pl. xiv.
Upper Cretaceous (Niobrara); Kansas.

ZANCLITES Jordan. Type *Z. xenurus* Jordan.

Jordan, D. S. 1925 A, 224.

Zanclites xenurus Jordan.

Jordan, D. S. 1925 A, 224, fig. 15.
Upper Cretaceous (Niobrara); Kansas.

KANSANUS Jordan. Type *K. martini* Jordan.

Jordan, D. S. 1925 A, 226.

Kansanus martini Jordan.

Jordan, D. S. 1925 A, 226, pl. xvi.
Upper Cretaceous (Niobrara); Kansas.

LUXILITES Jordan. Type *L. striolatus* Jordan.

Jordan, D. S. 1925 A, 226.

Luxilites striolatus Jordan.

Jordan, D. S. 1925 A, 227, pl. xvii.
Upper Cretaceous (Niobrara); Kansas.

FERRIFRONS Jordan. Type *F. rugosus* Jordan.

Jordan, D. S. 1925 A, 227.

Ferrifrons rugosus Jordan.

Jordan, D. S. 1925 A, 228.
Upper Cretaceous (Niobrara); Kansas.

PTEROTHRISSIDÆ Gill.

Gill, T. 1893 A, 131.
Cockerell, T. D. A. 1919 A, 172.
Goode and Bean 1895 A, 50.
Jordan, D. S. 1905 A, ii, 44 (Thryptodontidæ); 46 (Pterothrissidæ).
1907 A, 127, fig. 22 ("pterothrissoid fish").
1907 B, 273.
1923 A, 119.

CHICOLEPIS Cockerell. Type *C. punctatus* Cockerell.

Cockerell, T. D. A. 1919 A, 177.

Chicolepis punctatus Cockerell.

Cockerell, T. D. A. 1919 A, 177, pl. xxxiv, fig. 1.
Upper Cretaceous (Chico); California.

Superfamily CLUPEOIDÆ, new form.

Frost, G. A. 1925 A, 153 (Clupeoidea).
Gill, T. 1873 F, 11 (Clupeoidea).
Jordan, D. S. 1905 A, ii, 41 (Clupeoidea).
1907 B, 268 (Clupeoidea).
1923 A, 119 (Clupeoidei).
Regan, C. T. 1909 B, 77 (Clupeoidei).
Ridewood, W. G. 1905 B, 448 ("clupeoid fishes").
Tracy, H. C. 1920 A, 441 ("clupeoids").

ICHTHYODECTIDÆ Crook.

Crook, A. R. 1892 A, 111, 121.
Hay, O. P. 1902 A, 383 (Chirocentridæ, Ichthyodectinæ).
Arldt, T. 1923 A, 499 ("saurodontiden").
Cockerell, T. D. A. 1919 A, 177, 178.
Etheridge, R. 1905 A, 5.
Fowler, H. W. 1911 A, 154.
Jordan, D. S. 1905 A, ii, 48.
1907 B, 274, 761.
Jordan, D. S. 1923 A, 119.
Regan, C. T. 1922 A, 206.
Sauvage, H. E. 1901 F, 77 ("ichthyodectidés").
Schlosser, M. 1901 L, 479.
1917 A, 140, 141, 142 ("ichthyodectiden").
Zittel and Koken 1911 A, 128.
Zittel and Schlosser 1923 A, 127.
Zittel and Woodward 1902 A, 95.

XIPHACTINUS Leidy. Type *X. audax* Leidy.

Leidy, J. 1870 H, 12.
Hay, O. P. 1902 A, 383 (Portheus, in part).
Bayer, F. 1908 A, 1.
Cope, E. D. 1871 S, 608.
Jordan, D. S. 1919 B, 358.
Rogers, A. F. 1924 A, 546.
Woodward, A. S. 1901 A, 92 (Syn. of Portheus).
The fin-ray on which this genus was based probably belonged to one of the species below referred to *Portheus*.

Xiphactinus audax Leidy.

Leidy, J. 1870 H, 12.
Hay, O. P. 1902 A, 384 (Portheus?).
Upper Cretaceous (Niobrara); Kansas.

PORTHEUS Cope. Type *P. molossus* Cope.

Hay, O. P. 1902 A, 383.
Ameghino, F. 1906 A, 186.
Andreae, A. 1901 A, 309.
1904 A, 309 (Porteus).
Bayer, F. 1908 A, 1 [Portheus (Xiphactinus)].
1909 A, 48.
Cockerell, T. D. A. 1917 A, 62.
1919 A, 177 (Hypsodon).
Cope, E. D. 1880 U, 147.
Dames, W. 1899 I, 155.
Dean, Gudger, Henn 1923 A, 626.
Dollo, L. 1892 F, 181.
Etheridge, R. 1905 A, 5.
Hay, O. P. 1899 H, 487.
Hennig, E. 1912 A, 490.
Jordan, D. S. 1919 B, 186, 219.
Leriche, M. 1902 B, 137.
McClung, C. E. 1908 B, 235, pls. x-xii; text-figs. 1-7.
Osborn, H. F. 1904 I, 35.
1917 B, 209, 210, fig.
Priem, F. 1908 B, 61, fig. 23 (Portheus).
Ridewood, W. G. 1905 B, 492.
Rogers, A. F. 1924 A, 546 (Xiphactinus).
Sauvage, H. E. 1899 C, 151.
Schlosser, M. 1901 L, 480.
Storms, R. 1891 A, 150, 151.
Woodward, A. S. 1894 C, 444.
1901 A, 87, 921.
1912 A (1907), 99, pls. xxi; text-figs. 26-30.
1913 A, 529 (Portheus,=? Chirocentrites).
Zittel and Koken 1911 A, 128.
Zittel and Schlosser 1923 A, 127 (Portheus).
Zittel and Woodward 1902 A, 95.
This genus is possibly identical with *Xiphactinus* and *Hypsodon*.

Portheus brachygnathus Stewart.

Hay, O. P. 1902 A, 384.
Schlosser, M. 1901 L, 479 (Xiphactinus).
Woodward, A. S. 1901 A, 97.
Upper Cretaceous (Niobrara); Kansas.

Portheus? granulosus (Cockerell).

Cockerell, T. D. A. 1919 A, xxxii, fig. 5 (Hypsodon).
Upper Cretaceous (Mowry); Wyoming.

Portheus lestrio Cope.

Hay, O. P. 1902 A, 384.
Bayer, F. 1908 A, 3.
1909 A, 102.
Hussakof, L. 1908 A, 88.
Woodward, A. S. 1901 A, 97.
Cretaceous (Niobrara); Kansas.

Portheus lowii Stewart.

Hay, O. P. 1902 A, 384.
Cockerell, T. D. A. 1919 A, 178, pl. xxxiv, fig. 2 (Hypsodon).
Dames, W. 1899 I, 156.
Woodward, A. S. 1901 A, 97.
Upper Cretaceous (Benton); Kansas.

Portheus molossus Cope.

Hay, O. P. 1902 A, 384 (P. audax, P. molossus, P. thaumas).
Abel, O. 1922 C, 320.
Andreae, A. 1901 A, 309.
Anonymous, 1910 A, 198.
Bayer, F. 1908 A, 3 (P. molossus, P. thaumas).
1909 A, 98 (P. molossus); p. 100 (P. thaumas).
Cockerell, T. D. A. 1908 C, 173 (P. thaumas).
1919 A, 177, pl. xxxii, fig. 8; pl. xxxiii, figs. 1, 2 (Hypsodon).
Cope, E. D. 1891 N, 23, fig. 10.
Holland, J. W. 1909 A, 453 (P. molossus).
Hussakof, L. 1908 A, 88, fig. 46 (P. molossus); 89 (P. thaumas).
Jaekel, O. 1911 A, 89, 90, figs. 100, 101 (P. molossus, P. thaumas).
Jordan, D. S. 1905 A, ii, 48, fig. 36.
1907 B, 274.
Lambe, L. M. 1914 H, 399, 402, pl. i.
1915 B, 118.
Martin, H. T. 1907 A, 128, fig.
Osborn, H. F. 1901 E, 331.
1901 G, 160.
1904 E, 377, pl. x; text-figs. 1-4.
1904 F, 35.
Reeside, J. B. 1924 A, 11, pl. iii.
Sternberg, C. H. 1881 B, 4.
1905 A, 127.
1907 A, 295.
1907 C, 122 (P. colossus).
1909 C, 54, fig. 12.
1913 A, 48.
1917 A, 11, 168, fig. 5.
1918 A, 205 (Porthus).
Stromer, E. 1912 A, 33, fig. 44.
Woodward, A. S. 1901 A, 92 (P. molossus); 97 (P. thaumas).
1912 A (1907), 100, text-figs. 26-28.
1913 A, 529, pl. xviii.
1921 C, 181.
Zittel and Schlosser 1923 A, 128, fig. 224.
Upper Cretaceous (Niobrara): Kansas.

Portheus mudgei Cope.

Hay, O. P. 1902 A, 384.
Bayer, F. 1908 A, 2.
1909 A, 102.
Woodward, A. S. 1901 A, 97.
Upper Cretaceous (Niobrara); Kansas.

Portheus? radiatulus (Cockerell).

Cockerell, T. D. A. 1919 A, 178, pl. xxxii, figs. 6, 7 (Hypsodon).
Reeside, J. B. 1924 A, 12, pl. iii (Hypsodon).
Upper Cretaceous (Mancos); Colorado, New Mexico: Upper Cretaceous (Mesa Verde); Wyoming.

Portheus sp. indet.

Hill, R. T. 1901 A, 328 (Xiphactinus). Lower Cretaceous (Eagle Ford); Texas.
Hussakof, L. 1908 A, 90 (Portheus). Upper Cretaceous (Niobrara); Kansas.

Reeside, J. B. 1924 A, 17, pl. iii (Hypsodon). Upper Cretaceous (Lewis); Colorado.
Stephenson, L. W. 1912 A, 128, 140 (Portheus sp. indet.). Upper Cretaceous, North Carolina.
Sternberg, C. H. 1906 B, 122 (Portheus). Cretaceous (Niobrara); Kansas.

CLADOCYCLUS Agassiz. Type *C. gardneri* Agassiz.

Agassiz, L. 1841, Edinb. New Philos. Jour., xxx, 83.
Hay, O. P. 1902 A, 399.
Bronn, H. G. 1849 A, 675.
Cockerell, T. D. A. 1917 A, 61.
Jordan, D. S. 1923 A, 123.
Leriche, M. 1902 B, 137.
Storms, R. 1891 A, 156.
Toula, F. 1905 A, 65.
Woodward, A. S. 1894 C, 445.
1912 A (1903), 96 (Syn. of Ichthyodectes).

Cladocyclus occidentalis Leidy.

Hay, O. P. 1902 A, 399.
Cockerell, T. D. A. 1919 A, 177 (Syn.? of Hypsodon audax).
Lambe, L. M. 1904 C, 21, 36, 44.
Tyrrell, J. B. 1892 A, 108.
Upper Cretaceous (Colorado); Nebraska or Dakota, Manitoba.

ICHTHYODECTES Cope. Type *I. ctenodon* Cope.

Hay, O. P. 1902 A, 384.
Andreæ, A. 1904 A, 309.
Arldt, T. 1923 A, 499.
Bayer, F. 1908 A, 3.
Boulenger, G. A. 1904 D, 561, 743.
Cockerell, T. D. A. 1919 A, 179.
Cope, E. D. 1880 U, 147.
Dames, W. 1899 I, 155.
Dean, Gudger, Henn 1923 A, 684.
Dollo, L. 1892 F, 181.
Etheridge, R. 1905 A, 6.
Ridewood, W. G. 1905 B, 492.
Storms, R. 1891 A, 150.
Woodward, A. S. 1901 A, 99.
1912 A, (1903), 93; (1907), 97, text-fig. 24.
Zittel and Koken 1911 A, 129.
Zittel and Schlosser 1923 A, 128.
Zittel and Woodward 1902 A, 95.

Ichthyodectes acanthicus Cope.

Hay, O. P. 1902 A, 384.
Hussakof, L. 1908 A, 75, fig. 39.
Woodward, A. S. 1901 A, 107.
Cretaceous (Niobrara); Kansas.

Ichthyodectes anaides Cope.

Hay, O. P. 1902 A, 384.
Etheridge, R. 1905 A, 8.
Hay, O. P. 1903 A, 54.
Hussakof, L. 1908 A, 75.
Lambe, L. M. 1914 H, 402.
Woodward, A. S. 1901 A, 100.
Cretaceous (Niobrara); Kansas.

Ichthyodectes cruentus Hay.

Hay, O. P. 1902 A, 385.
Woodward, A. S. 1901 A, 107.
Cretaceous (Niobrara); Kansas.

Ichthyodectes ctenodon Cope.

Hay, O. P. 1902 A, 385.
Etheridge, R. 1905 A, 8.
Hussakof, L. 1908 A, 76.
Woodward, A. S. 1901 A, 100.
1912 A, (1903), 93.
Cretaceous (Niobrara); Kansas.

Ichthyodectes hamatus Cope.

Hay, O. P. 1902 A, 385.
Etheridge, R. 1905 A, 8.
Hussakof, L. 1908 A, 76.
Woodward, A. S. 1901 A, 107.
Cretaceous (Niobrara); Kansas.

Ichthyodectes multidentatus Cope.

Hay, O. P. 1902 A, 385.
1903 A, 57, text-figs. 42, 43.
Hussakof, L. 1908 A, 76.
Loomis, F. B. 1900 A, 243, 245, pl. xxiii, fig. 9; text-figs. 8, 9.
Woodward, A. S. 1901 A, 107.
Cretaceous (Niobrara); Kansas.

Ichthyodectes parvus Stewart.

Hay, O. P. 1902 A, 385.
Upper Cretaceous (Niobrara); Kansas.

Ichthyodectes prognathus Cope.

Hay, O. P. 1902 A, 385.
Hussakof, L. 1908 A, 77.
Woodward, A. S. 1901 A, 107.
Upper Cretaceous (Niobrara); Kansas.

Ichthyodectes sp. indet.

Cockerell, T. D. A. 1919 A, 179. Cretaceous (Niobrara); Montana: Cretaceous (Benton); Colorado.
Hill, R. T. 1901 A, 328 Lower Cretaceous (Eagle Ford); Texas.
Reeside, J. B. 1923 A, 205. Cretaceous (Dakota?); Colorado.
1924 A, 11. Upper Cretaceous (Mancos); Colorado.

GILLICUS Hay. Type *Portheus arcuatus* Cope.

Hay, O. P. 1902 A, 386.
1903 A, 59.
Hennig, E. 1912 A, 499.
Jordan, D. S. 1920 C, 480.

McClung, C. E. 1908 B, 243, fig. 8.
Woodward, A. S. 1901 A, 99, 101 (Ichthyodectes).
Zittel and Koken 1911 A, 129.
Zittel and Schlosser 1923 A, 128.
Zittel and Woodward 1902 A, 95.

Gillicus arcuatus (Cope).

Hay, O. P. 1902 A, 386.
Hussakof, L. 1908 A, 74.
Lambe, L. M. 1914 H, 402.
Upper Cretaceous (Niobrara); Kansas.

SAUROCEPHALIDÆ Zittel.

Zittel, K. A. 1890 A (1888), 262.
Hay, O. P. 1902 A, 385 (Saurocephalinæ).
Allis, E. P. 1909 A, 201.
Arldt, T. 1907 D, 154, 281.
Boulenger, G. A. 1904 A, 164 (Saurodontidæ).
1904 D, 561 (Saurodontidæ).
Dean, Gudger, Henn 1923 A, 626 (Saurodontidæ).
Goodrich, E. S. 1909 A, 390 (Saurodontidæ).
Hay, O. P. 1899 H, 487.
Jordan, D. S. 1923 A, 120 (Saurodontidæ).
Ridewood, W. G. 1905 B, 492 (Saurodontidæ).
Sauvage, H. E. 1901 A, 5 (Saurodontidæ).
1901 F, 77 ("saurodontidés").
Schlosser, M. 1917 A, 140 (Saurodontiden).
Zittel and Woodward 1902 A, 96 (Saurodontidæ).

SAUROCEPHALUS Harlan. Type *S. lanciformis* Harlan; not of Agassiz.

Hay, O. P. 1902 A, 385.
Agassiz, L. 1845 B, 300.
Andreae, A. 1901 A, 308 (Saurocephalus, Saurodon).
1904 A, 309.
Arldt, T. 1923 A, 499.
Bayer, F. 1908 A, 3 (Saurodon, Daptinus).
Bronn, H. G. 1848 B, 1112.
1849 A, 675.
Cope, E. D. 1871 S, 608.
1880 U, 147 ("saurocephale").
Dames, W. 1899 I, 155 (Saurocephalus, Saurodon, Daptinus).
Dollo, L. 1892 F, 181 (Saurocephalus, Daptinus).
Fowler, H. W. 1911 A, 154.
Gervais, P. 1852 A, explan. pl. lxx.
1859 A, 522, pl. lxx.
Giebel, C. G. 1855 A, 104.
Gray, J. E. 1825 A, 196.
Harlan, R. 1833 A, 174.
Hay, O. P. 1899 H, 480.
1903 A, 48.
Hennig, E. 1912 A, 490 (Saurodon, Saurocephalus).
Jordan, D. S. 1923 A, 119, 120.
Jordan and Evermann 1917 A, 118.
Mantell, G. A. 1844 A, 665, fig. 136.
Priem, F. 1908 B, 37.
Ridewood, W. G. 1905 B, 492 (Saurodon).
Sauvage, H. E. 1899 C, 150 (Saurodon).
Schlosser, M. 1901 L, 479 (Saurocephalus, Saurodon).
Storms, R. 1891 A, 150.
Woodward, A. S. 1901 A, 111 (Saurodon); 113 (Saurocephalus).
1912 A (1907), 103 (Saurodon).
Zittel and Koken 1911 A, 128.
Zittel and Schlosser 1923 A, 128.
Zittel and Woodward 1902 A, 96 (Saurocephalus, Saurodon).

Saurocephalus arapahovius Cope.

Hay, O. P. 1902 A, 385.
Woodward, A. S. 1901 A, 114.
Upper Cretaceous (Niobrara); Kansas.

Saurocephalus broadheadi (Stewart).

Hay, O. P. 1902 A, 386.
Dames, W. 1899 I, 156 (Daptinus).
Stewart, A. 1900 A, 313, pl. xlviii, figs. 1*a*-1*c* (Saurodon).
Woodward, A. S. 1901 A, 113 (Saurodon).
Upper Cretaceous (Niobrara); Kansas.

Saurocephalus dentatus Stewart.

Hay, O. P. 1902 A, 386.
1899 H, 485.
Woodward, A. S. 1901 A, 114.
Upper Cretaceous (Niobrara); Kansas.

Saurocephalus goodeanus (Cope).

Hay, O. P. 1902 A, 385 (Ichthyodectes).
1903 A, 52, text-fig. 41.
Hussakof, L. 1908 A, 97, fig. 49.
Woodward, A. S. 1901 A, 107 (Ichthyodectes).
Cretaceous (Niobrara); Kansas.

Saurocephalus lanciformis Harlan.

Hay, O. P. 1902 A, 386.
Harlan, R. 1833 A, 174, pl. i, figs. 1-5.
Hay, O. P. 1899 H, 480, figs. 1-3.
1903 A, 50.
Hussakof, L. 1908 A, 97 (S. arapahovius a syn.).
Spillman, W. 1863 A.
Woodward, A. S. 1901 A, 113.
Cretaceous (Niobrara); Kansas, Nebraska.

Saurocephalus leanus (Hay).

Hay, O. P. 1902 A, 386.
Fowler, H. W. 1911 A, 155, fig. 94.
Mantell, G. A. 1844 A, 666, fig. 136 (Saurodon).
Merrill, G. P. 1907 A, 19 (Saurocephalus, Saurodon).
Woodward, A. S. 1901 A, 111 (Saurodon).
1912 A (1902), 44 (Saurodon).
Upper Cretaceous (Navesink-Hornerstown); New Jersey.

Saurocephalus pamphagus Hay.

Hay, O. P. 1902 A, 386.
1899 H, 486, fig. 5.
Hussakof, L. 1908 A, 97.
Cretaceous (Niobrara); Kansas.

Saurocephalus phlebotomus Cope.

Hay, O. P. 1902 A, 386.

Cope, E. D. 1872 I, 343 (Saurocephalus).
Crook, A. R. 1892 A, 120, 123 (Daptinus).
Gorjanovič-Kramberger, D. 1891 A, 69, pl. ii, fig. 5 (Daptinus. This species?).
Hay, O. P. 1899 H, 485 (Saurodon).
1903 A, 49, text-fig. 38.
Hussakof, L. 1908 A, 98.
Newton, E. T. 1878 B (Daptinus).
Woodward, A. S. 1901 A, 112 (Saurodon). Cretaceous (Niobrara); Kansas: Cretaceous; Hungary?.

Saurocephalus pygmæus (Loomis).

Hay, O. P. 1902 A, 386.
Woodward, A. S. 1901 A, 113 (Saurodon). Upper Cretaceous (Niobrara); Kansas.

Saurocephalus stewarti, nom. nov.

Hay, O. P. 1902 A, 386 (Saurocephalus ferox; not of Gervais).
Stewart, A. 1898 C, 183, pl. xv, pl. xvi, figs. 1-3 (Saurodon ferox).
Woodward, A. S. 1901 A, 113 (Saurodon ferox). Upper Cretaceous (Niobrara); Kansas.

Saurocephalus xiphirostris (Stewart).

Stewart, A. 1898 D, 178 (Saurodon).
Hay, O. P. 1902 A, 386.
1903 A, 51, text-figs. 39, 40.
Hussakof, L. 1908 A, 96.
Woodward, A. S. 1901 A, 113 (Saurodon).
1912 A (1907), 104 text-fig. 31 (Saurodon). Cretaceous (Niobrara); Kansas.

Saurocephalus sp. indet.

Hussakof, L. 1908 A, 98 (This genus?). Upper Cretaceous (Niobrara); Kansas.
Tuomey, M. 1848 A, 180 ("Saurocephalus"). Pliocene?; South Carolina.

CLUPEIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 95.
Hay, O. P. 1902 A, 390.
Abel, O. 1912 F, 441.
Agassiz, L. 1832 A, 142 ("clupeoiden").
Ahlborn, F. 1896 B, 12 ("clupeiden").
Allis, E. P. 1909 A, 213.
1915 A.
Arldt, T. 1907 D, 646.
1912 A, 762 (Clupeinæ).
1923 A, 500 ("clupeiden").
Baudelot, E. 1873 A, 97, 192, pl. v, figs. 8, 12 (Clupea).
Belling, D. E. 1912 A, 60 ("clupoiden").
Bonaparte, C. L. 1833 B, 1201.
1838 B, 132.
Boulenger, G. A. 1901 D, 123.
1904 A, 164.
1904 D, 562, 736.
1917 B, 330.
Bronn, H. G. 1849 A, 780, seq. (Clupeoidei).
Bridge, T. W. 1896 A, 557.
Carus, V. 1875 A, 577 (Clupeoidei).
Cockerell, T. D. A. 1910 B, 61 ("clupeid fishes").
1913 B, 123.
Cope, E. D. 1871 D, 455.
Creaser, C. W. 1926 A, 53.
Cunningham, J. T. 1897 A, 493.
1912 A, 246.
Cuvier, G. 1805 A ("harengs").
Dahl, K. 1910 A, 603.
Dean, Gudger, Henn 1923 A, 675.
Dietz, P. A. 1917 A, 85.
Derjugin, K. 1910 A, 603.
Duméril, A. 1856 A, 412 ("clupéides").
Eastman, C. R. 1911 B, 377 ("clupeoids").
Fitzinger, L. J. 1873 A, 37 (Clupea).
Fryd, C. 1901 A, 34.
Fulton, T. W. 1906 A, 77.
Gaupp, E. 1898 B, 823 ("clupeiden").
Gill, T. 1861 C, 33 ("clupioids").
1885 C, 135.
Goette, A. 1879 A, 128 ("clupeiden").
Goodrich, E. S. 1909 A, 391.
Gregory, W. K. 1907 D, 471 ("clupeoid fishes").
Haller, B. 1906 A, 233 ("clupeiden").
Hase, A. 1911 B, 338 ("clupeoid").
Hasse, C. 1873 A, 584, figs. 9-12 ("clupeiden").
1873 B, 629 ("clupeiden").
Heckel, J. 1850 A, 364.
1850 B, 146 ("clupeiden").
1856 A, 242.
Hoernes, R. 1886 A, 529.
Hoeven, J. 1822 A (Clupeæ).
Jordan, D. S. 1885 A, 135.
1905 A, II, 49, 564 (Clupeidæ); 43 (Spaniodontidæ).
1907 A, 126, figs. 20, 21 ("Clupeoid fish, A. B. C.").
1907 B, 275, 761.
1921 A, 242.
1923 A, 120.
Jordan and Gilbert 1882 A, 262.
Klaatsch, H. 1890 A, 165 ("clupeiden").
Klein, E. F. 1868 A ("clupeen").
1879 A, 106 (Clupeina).
1884 A, 131, 132, 134, 135, 138, 147, 148, 153, 156, 164, 230, 242, 248.
1885 A, 109, 114, 146, 161, 189, 215, 242.
1886 A, 206, 224, 259, 294.
Kner, R. 1861 A, 250 (Clupeoidei).
Köstlin, O. 1844 A ("clupeen").
Kolzoff, N. K. 1896 A, 515, fig. 1 (Clupea).
Leunis and Ludwig 1883 A, 756.
Lönnberg, E. 1902 A.
Meckel, J. F. 1825 A ("clupeen").
Meek, A. 1916 A, 65.
Moodie, R. L. 1911 G, 282.
Norman, E. W. 1926 A.
Palacký, J. 1902 B, 141 ("clupeiden").
Pychlau, W. 1908 A, 693 ("clupeiden").
Rauther, M. 1913 A, 1100.
Regan, C. T. 1910 A, 356.
1910 B, 531.
1916 A, 1.
Retterer, E. 1905 C, 246 (Clupea).
Richardson, J. 1836 A, 229 (Clupeoideæ).
Sagemehl, M. 1883 A ("clupeiden").
1884 A, 101 ("clupeiden").
Schlosser, M. 1917 A, 139, 140, 142 ("clupeiden").

Schubert, R. J. 1906 A, 657.
Siebenrock, F. 1901 A, 108.
Stannius, H. 1849 A, 538.
Steinmann, G. 1927 A, 12 ("clupeiden").
Stephan, P. 1900 A, 301.
Thilo, O. 1908 A, 777 ("clupeiden").
Tims, H. W. 1905 A, 55 ("clupeoids").
Traquair, R. H. 1900 C, 508 ("clupeoids").
Wagner, R. 1843 A ("häringe").
Wallace, A. R. 1876 A, ii, 454.
Whitehouse, R. H. 1910 A, 426.
1910 B, 598 ("clupeoids").
1910 C, 139 (Clupea).
Woodward, A. S. 1901 A, vii, 5, 128.
Zittel and Koken 1911 A, 120.
Zittel and Schlosser 1923 A, 125.
Zittel and Woodward 1902 A, 96.

Clupea Linnæus. Type *C. harengus* Linnæus.

Linnæus, C. 1758 A, 317.
Allis, E. P. 1909 A, 213.
Arldt, T. 1923 A, 501.
Baudelot, E. 1873 A, 97, 192, pl. v, figs. 8, 12.
Belling, D. E. 1912 A, 50.
Bronn, H. G. 1848 A, 308.
1849 A, 671.
Cockerell, T. D. A. 1906 A, 160.
1910 B, 63.
1913 B, 123.
Cuvier, G. 1815 A, 109.
Dean, Gudger, Henn 1923 A, 674, 675.
Derjugin, K. M. 1909 A, pl. vii, figs. 61, 62.
1910 A, 603.
Dietz, P. A. 1914 A, 102.
Duméril, A. 1856 A, 416 ("clupée").
Frost, G. A. 1925 A, 154, pl. xi.
Fryd, C. 1901 A, 15, 34, fig. 18.
Fulton, T. W. 1906 A, 77, pls. iii B, v.
Gaupp, E. 1905 D, 914 ("clupeiden").
Giebel, C. G. 1855 A, 109.
Gill, T. 1885 C, 135.
Goodrich, E. S. 1922 A, 505.
Hammarsten, O. D. 1911 A, 677.
Hasse, C. 1873 A, 584.
Hubbs, C. L. 1926 A, 65.
Huntsman, A. G. 1919 A, 592.
Imms, A. D. 1904 A, 23, figs. 122. 125.
Jordan, D. S. 1885 A, 135.
1905 A, ii, 49, 564.
1907 B, 275.
1910 A, 32.
Jordan and Evermann 1917 A, 15.
Jordan and Gilbert 1882 A, 264.
Kingsley, J. S. 1925 A, 239, fig. 251.
Klaatsch, H. 1890 A, 255.
Klein, E. F. 1879 A, 106.
Klein, E. F. 1884 A, 167, 230, 248, pl. ii.
1885 A, 114, 189, 215, 229.
1886 A, 224, 259, fig. 26.
Kolzoff, N. K. 1896 A, 515, fig. 1.
Ledouble, A. F. 1906 A, 551.
Noorden, C. 1883 A, 235, pl. x.
Meek, A. 1916 A, 67-106.
Norman, E. W. 1926 A, 407, figs. 45, 46, 49-51.
Owen, R. 1866 A, 38.
Pevsner, V. 1926 A, 304.
Regan, C. T. 1910 A, 357.
1910 B, 532, fig. 1.
1916 A, 2.
Retterer, E. 1905 C, 246.
Ridewood, W. G. 1904 A, 58.
1904 B, 215.
1905 B, 453.
Schlosser, M. 1917 A, 145.
Stadtmüller, F. 1926 A, 160, fig. 6.
Stannius, H. 1854 A.
Starks, E. C. 1905 A, 754.
Steinmann, G. 1927 A, 12.
Stephan, P. 1900 A, 286.
Tracy, H. C. 1920 A, 444.
Wagner, R. 1843 A.
Weber, E. H. 1821 A, 1061.
Wells, F. R. 1922 A, 1213, figs. 1-11.
Whitehouse, R. H. 1910 A, 427.
1910 B, 597, pl. xlvii, fig. 5.
1910 C, 139.
Woodward, A. S. 1901 A, 146.
Zittel and Koken 1911 A, 120.
Zittel and Schlosser 1923 A, 125.
Zittel and Woodward 1902 A, 96.

Clupea? sp. indet.

Jordan, D. S. 1907 A, 126, 127 ("clupeoid fishes A, B, C."). Miocene; California.

Pomolobus Rafinesque. Type *P. chrysochloris* Rafinesque.

Rafinesque, C. S. 1820, Ichth. Ohien., 38.
Cockerell, T. D. A. 1913 B, 124.
Creaser, C. W. 1926 A, 53.
Dean, Gudger, Henn 1923 A, 696.
Jordan, D. S. 1905 A, ii, 50.
1907 B, 276.
Jordan and Evermann 1896 A, 424.
Jordan and Gilbert 1882 A, 265.
Meek, A. 1916 A, 103.
Regan, C. T. 1917 A, 296, 297.
Tracy, H. C. 1920 A, 453, pls. i-v.

Pomolobus? chicoensis Cockerell.

Cockerell, T. D. A. 1919 A, 180, pl. xxiv, fig. 5. Upper Cretaceous (Chico); California.

Diplomystus Cope. Type *D. dentatus* Cope.

Hay, O. P. 1902 A, 391.
Arldt, T. 1923 A, 501.
Chapman, F. 1918 A, 26, 32.
Cockerell, T. D. A. 1908 C, 173.
Cope, E. D. 1877 AA, 1.
Costa, O. G. 1850, Atti. Accad. Pontan., v, 228 (Histiurus; type *H. elatus* Costa).
Coulon, L. 1903 A, 154.
Dollo, L. 1904 C, 159 (Copeichthys; type *D. dentatus*).
Eastman, C. R. 1911 B, 374.
1912 B, 372, 374.
Haseman, J. D. 1912 A, 98.
Jordan, D. S. 1905 A, ii, 52, 566.

Jordan, D. S. 1907 B, 278.
1910 A, 23.
1919 B, 388.
1921 A, 243, 244.
Jordan and Gilbert 1920 A, 11.
Ogilby, J. D. 1892, Rec. Austral. Mus., ii, 26 (Hyperlophus; type *Clupea sprattellides* Ogilby).
Rogers, A. F. 1924 A, 545 (Diplomystis).
Schlosser, M. 1917 A, 144.
Seeley, H. G. 1886 A, 412.
Woodward, A. S. 1892 H, 412.
1901 A, viii, 139 (Diplomystus); viii, 146 (Clupea).
1922 C, 97, fig. 106.
Zittel and Koken 1911 A, 120.
Zittel and Woodward 1902 A, 96.

Diplomystus analis Cope.

Hay, O. P. 1902 A, 391.
Cockerell, T. D. A. 1908 C, 173.
Coulon, L. 1903 A, 154.
Eastman, C. R. 1912 B, 378.
Merrill, G. P. 1907 A, 10.
Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 8.
Woodward, A. S. 1901 A, 139 (Syn. of *D. dentatus*).
Eocene (Green River); Wyoming.

Diplomystus dentatus Cope.

Hay, O. P. 1902 A, 391.
Cockerell, T. D. A. 1908 C, 173.
Eastman, C. R. 1912 B, 373, 374, 378.
Holland, W. J. 1910 B, 24, pl. vi.
Hussakof, L. 1908 A, 71.
Jordan, D. S. 1910 A, 24, pls. v, vi.
Lee, Stone, Gale 1915 A, 74, pl. xix.
Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 8.
Woodward, A. S. 1901 A, 139.
Eocene (Green River); Wyoming.

Diplomystus pectorosus Cope.

Hay, O. P. 1902 A, 391.
Cockerell, T. D. A. 1908 C, 173.
Eastman, C. R. 1912 B, 374, 378.
Merrill, G. P. 1907 A, 10.
Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 9 (D. pecterosus).
Woodward, A. S. 1901 A, 140 (Syn. of *D. dentatus*).
Eocene (Green River); Wyoming.

Diplomystus theta Cope.

Hay, O. P. 1902 A, 391.
Woodward, A. S. 1901 A, 140 (Syn. of *D. dentatus*).
Eocene (Green River); Wyoming.

KNIGHTIA Jordan. Type *Clupea humilis* Leidy = *K. eocæna* Jordan.

Jordan, D. S. 1907 A, 136.
Hay, O. P. 1902 A, 391 (Diplomystus in part).
Cockerell, T. D. A. 1908 C, 173.
Cope, E. D. 1870 U, 316, Lithichthys; type *L. pusillus=?Clupea pusillus* Cope.
Eastman, C. R. 1912 B, 374.
Jordan, D. S. 1910 A, 23, 24.
1921 A, 246.
Jordan and Gilbert 1920 A, 11.

Knightia alta (Leidy).

Hay, O. P. 1902 A, 391 (Diplomystus).
Cockerell, T. D. A. 1908 C, 173.
Eastman, C. R. 1912 B, 374, 378 (Diplomystus).
Hussakof, L. 1908 A, 78.
Jordan, D. S. 1907 A, 137.
Merrill, G. P. 1907 A, 8 (Clupea); 10 (Diplomystus).
Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 10.
Zittel and Schlosser 1923 A, 125.
Woodward, A. S. 1901 A, 145 (Diplomystus).
Eocene (Green River); Wyoming.

Knightia copei Tanner.

Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 11, pl. iii, fig. 6.
Eocene (Green River); Wyoming.

Knightia eocæna Jordan.

Jordan, D. S. 1907 A, 136.
Hay, O. P. 1902 A, 391 (Diplomystus humilis).
Cockerell, T. D. A. 1908 C, 173 (Clupea humilis, C. pusilla. "Both preoccupied").
1910 B, 63.
Cope, E. D. 1870 U, 316 (Lithichthys pusillus. This species?).
Dollo, L. 1904 C, 161 (Copeichthys humilis).
Eastman, C. R. 1912 B, 378.
Hussakof and Bryant 1919 A, 198 (K. humilus).
Jordan, D. S. 1905 A, ii, 52, fig. 41 (Diplomystus humilis).
1910 A, 23, 24, pl. vii.
Merrill, G. P. 1907 A, 8 (Clupea humilis); 10 (Diplomystus humilis).
Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 9.
Woodward, A. S. 1901 A, 144 (Diplomystus humilis).
Eocene (Green River); Wyoming.

XYNE Jordan and Gilbert. Type *X. grex* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 25.
Jordan, D. S. 1920 C, 568.
1921 A, 242.
Jordan and Gilbert 1920 A, 9 (Xyne); 11 (Ellimma).

Xyne fitgeri Jordan and Gilbert, J. Z

Jordan and Gilbert 1920 A, 10, pls. iv, v.
Jordan, D. S. 1921 A, 243.
Miocene (Monterey); California.

Xyne grex Jordan and Gilbert.

Jordan and Gilbert 1919 A, 25, pl. ix, fig. 1; pl. x, fig. 2; pl. xi, figs. 2, 3.
Hubbs, C. L. 1924 A, 178.
Jordan, D. S. 1920 A, 18, fig. 2.
1921 A, 239, 242, pl. xviii.
Jordan, D. S. 1922 D, 272, fig. 2.
1925 B, 40.
Jordan and Gilbert 1920 A, 9, pls. i-iii.
Rogers, A. F. 1924 A, 545.
Woodward, A. S. 1921 C, 181.
Miocene (Monterey); California.

QUISQUE Jordan. Type *Q. gilberti* Jordan.

Jordan, D. S. 1920 C, 571.
Jordan, D. S. 1921 A, 246.

Quisque bakeri Jordan

Jordan, D. S. 1922 A, 249, figs. 1, 2.
Miocene (Lower); Texas.

Quisque gilberti Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 245, pl. xx, fig. *a*.
Miocene (Monterey); California.

XYRINIUS Jordan and Gilbert. Type *X. houshi* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 50.
Jordan, D. S. 1920 C, 560.
1921 A, 244.

Xyrinius barbaræ (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 27, pl. ix, fig. 3 (Ellimma).
Jordan, D. S. 1921 A, 244.
Jordan and Gilbert 1920 A, 11 (Ellimma).
Miocene (Monterey); California.

Xyrinius elmodenæ (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 26, pl. xii, fig. 1 (Ellimma).
Jordan, D. S. 1921 A, 244, pl. xix.
Jordan and Gilbert 1920 A, 11 (Ellimma).
Miocene (Monterey); California.

Xyrinius houshi Jordan and Gilbert.

Jordan and Gilbert 1919 A, 50, pl. xxi, fig. 2.
Jordan, D. S. 1921 A, 244.
Miocene (Monterey); California.

ALISEA Jordan and Gilbert. Type *A. grandis* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 28.

Alisea grandis Jordan and Gilbert.

Jordan and Gilbert 1919 A, 28, pl. xvii, fig. 3.
Jordan, D. S. 1921 A, 245, pl. xxvii, fig. *b*.
Miocene; California.

DIRADIAS Jordan. Type *D. aratus* Jordan.

Jordan, D. S. 1924 B, 42.
1925 B, 8.

Diradias aratus Jordan.

Jordan, D. S. 1924 B, 42, pl. F.
1925 B, 8.
1927 B, 89.
Miocene (Monterey); California.

Diradias fenestralis Jordan.

Jordan, D. S. 1925 B, 9, pl. i.
Jordan and Gilbert 1920 A, 17, pl. ix (Thyrsion velox, in part).
Miocene (Monterey); California.

XENOTHRISSA Jordan. Type *X. aphrasta* Jordan.

Jordan, D. S. 1925 B, 10.

Xenothrissa aphrasta Jordan.

Jordan, D. S. 1925 B, 10-49, pl. ii.
Miocene (Monterey); California.

LEMBICUS Jordan. Type *L. meiklejohni* Jordan.

Jordan, D. S. 1925 B, 42.

Lembicus meiklejohni Jordan.

Jordan, D. S. 1925 B, 42.
Miocene (Puente); Calfiornia.

EPELICHTHYS Jordan. Type *E. michaëlis Jordan.*

Jordan, D. S. 1925 B, 48.

Epelichthys michaëlis Jordan.

Jordan, D. S. 1925 B, 48, pl. 20.
Upper Miocene (San Miguel); California.

ENGRAULIDIDÆ Gill.

Gill, T. 1872 C, 17.
Cockerell, T. D. A. 1913 B, 123.
Günther, A. C. 1868 A, vii, 383 (Engraulidina).
Jordan, D. S. 1925 B, 12 (Engraulidæ).
Jordan and Evermann 1896 A, 439 (Engraulididæ).
Jordan and Gilbert 1882 A, 271 (Engraulididæ).

ENGRAULITES Jordan and Gilbert. Type *E. remifer* Jordan and Gilbert.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 B, 12.

Engraulites remifer Jordan and Gilbert.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 B, 12, pl. iii.
Miocene (Monterey); California.

DUSSUMIERIIDÆ Gill.

Gill, T. 1872 B, 17.
Günther, A. C. 1868 A, 464 (Dussumieriinæ).
Jordan, D. S. 1885 A, 136 (Dussumierinæ).
1905 A, ii, 52.
1923 A, 121.
1925 B, 41.
Jordan and Evermann 1896 A, 417 (Dussumierinæ).
Jordan and Gilbert 1882 A, 263 (Dussumieriinæ).
Jordan and J. Z. Gilbert 1919 A, 30.

Smithites elegans Jordan and Gilbert.

Jordan and Gilbert 1919 A, 30, pl. xxix, fig. 3.
Duncker, G. 1923 A, 39.
Jordan, D. S. 1925 B, 42.
1926 B, 221, 223.
1927 A, 191.
1927 B, 97.

This supposed species is not, as was originally believed, an American fish, but is *Clupea elongata* of Steindachner, an Austrian fossil form.

QUÆSITA Jordan and Gilbert. Type *Q. quisquilia* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 30, 31.
Jordan, D. S. 1921 A, 246.
1921 B, 462.

Quæsita alhambræ Jordan and Gilbert.

Jordan and Gilbert 1920 A, 43, pl. xxviii.
Jordan, D. S. 1921 A, 247.
Miocene; California.

Quæsita fragilis Jordan and Gilbert.

Jordan and Gilbert 1920 A, 43.
Jordan, D. S. 1921 A, 247, pls. xiv *b*, xxiii, fig. *b*.
Miocene?; California.

Quæsita quiescens Jordan.

Jordan, D. S. 1925 B, 11, pl. iii.
Miocene (Monterey); California.

Quæsita quisquilia Jordan and Gilbert.

Jordan and Gilbert 1919 A, 30, 32, pl. viii, fig. 3; pl. x, fig. 2; pl. xvii, fig. 1.
Jordan, D. S. 1921 A, 246, pl. xxii, fig. *a*.
1925 B, 12.
Miocene (Monterey); California.

STERNBERGIA Jordan and Gilbert. Type *S. waitei* Jordan and Gilbert.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 B, 41.

Sternbergia waitei Jordan and Gilbert.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 B, 41, pl. xx.
Miocene (Puente); California.

LYGISMA Jordan and Gilbert. Type *L. tenax* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 33.
Jordan, D. S. 1921 A, 248.
1921 B, 462.

Lygisma tenax Jordan and Gilbert.

Jordan and Gilbert 1919 A, 33, pl. viii, fig. 2; pl. xiv, fig. 1.
Jordan, D. S. 1921 A, 248, pl. xxi, fig. *a*.
1925 B, 42.
Jordan and Gilbert 1920 A, 12.
Miocene (Monterey); California.

Superfamily GONORHYNCHOIDÆ, new form.

Carus, V. 1875 A, 576 (Gonorhynchoidei).
Gill, T. 1893 A, 131 (Ganorhynchoidei).
Regan, C. T. 1909 B, 77 (Gonorhynchoidei, as suborder).

GONORHYNCHIDÆ Richardson.

Richardson, J. 1856 A, 254.
Hay, O. P. 1902 A, 392.
Allis, E. P. 1909 A, 214 (Gonorhynchus).
Arldt, T. 1907 D, 656.
1923 A, 504.
Boulenger, G. A. 1902 C, 389.

Boulenger, G. A. 1904 A, 165.
1904 D, 572.
Cockerell, T. D. A. 1923 A, 120.
Cope, E. D. 1871 T, 455.
Dean, Gudger, Henn 1923 A, 594, 634.
Dietz, P. A. 1917 A, 84.
Eastman, C. R. 1917 A, 289.
Frost, G. A. 1925 A, 161, pl. xiii (Gonorynchus).
Gill, T. 1885 C, 137.
Gregory, W. K. 1907 D, 471.
Günther, A. C. 1868 A, 373.
1881 A, 693.
Hubbs, C. L. 1919 B, 65.
Jordan, D. S. 1885 A, 137.
1905 A, ii, 54, 572.
1907 B, 280.
1923 A, 120 (Gonorhynchidæ, Notogoneidæ).
Meek, A. 1916 A, 63.
Ogilby, J. D. 1911 A, 30.
Ridewood, W. G. 1904 A, 59 (Gonorhynchus).
1905 A, 361.
Woodward, A. S. 1898 H, 413.
1901 A, ix, 6, 271.
Zittel and Schlosser 1923 A, 126.
Zittel and Woodward 1902 A, 100.

NOTOGONEUS Cope. Type *N. osculus* Cope.

Hay, O. P. 1902 A, 392 (Notogoneus); 394 (Procatostomus).
Arldt, T. 1923 A, 504.
Boulenger, G. A. 1904 D, 572.
Cockerell, T. D. A. 1916 A, 899.
1923 A, 120.
Eastman, C. R. 1917 A, 289.
Haseman, J. D. 1912 A, 98.
Jordan, D. S. 1923 A, 120.
Meek, A. 1916 A, 63.
Priem, F. 1900 A, 846.
1907 C.
Woodward, A. S. 1898 H, 413.
1901 A, ix, 275.
Zittel and Schlosser 1923 A, 126.
Zittel and Woodward 1902 A, 100.

Notogoneus osculus Cope.

Hay, O. P. 1902 A, 392 (N. osculus); 394 (Procatostomus constablei).
Cockerell, T. D. A. 1916 A, 899.
Dean and Eastman 1917 A, 623 (Procatostomus constablei a syn.).
Eastman, C. R. 1917 A, 289, fig. 9.
Hussakof, L. 1908 A, 83, fig. 43.
Jordan, D. S. 1905 A, ii, 56, fig. 44.
1907 B, 281, fig. 215.
Jordan and Gilbert 1919 A, 63.
Woodward, A. S. 1901 A, 275.
Eocene (Green River); Wyoming.

Superfamily STOMIATOIDÆ, new form.

Jordan, D. S. 1923 A, 126 (Enchodontoidei, Stomatioidei).
Regan, C. T. 1909 B, 82 (Stomiatoidei).
1923 A, 612 ("stomiatoid fishes").

GONOSTOMATIDÆ Regan.

Regan, C. T. 1923 A, 613.
Boulenger, G. A. 1904 D, 571 (Gonostomatinæ).
Goodrich, E. S. 1909 A, 395 (Gonostomatinæ).
Günther, A. C. 1864 A, 391 (Chauliodontina, in part).
Jordan, D. S. 1905 A, 129 (Gonostomidæ).
1921 A, 249.
1923 A, 127.
Jordan and Evermann 1896 A, 578 (Gonostominæ).
Regan, C. T. 1923 A, 613.

AZALOIS Jordan and Gilbert. Type *A. angelensis* Jord. and Gilbert.

Jordan and Gilbert 1919 A, 32.
Jordan, D. S. 1921 A, 249.

Azalois angelensis Jordan and Gilbert.

Jordan and Gilbert 1919 A, 32, pl. xv, fig. 2.
Jordan, D. S. 1921 A, 249, pl. xxiii, fig. *a*.
Miocene (Monterey); California.

ENCHODONTIDÆ.

Lydekker, R., in Nicholson and Lydekker 1899 A, 997.
Hay, O. P. 1902 A, 388.
Arldt, T. 1923 A, 516 ("enchodontiden").
Boulenger, G. A. 1904 A, 169.
1904 D, 608.
Cockerell, T. D. A. 1919 A, 183.
Dean, Gudger, Henn 1923 A, 641.
Fowler, H. W. 1911 A, 157.
Gregory, W. K. 1907 D, 488.
Hay, O. P. 1903 G, 691.
Jordan, D. S. 1905 A, ii, 136, 568.
1907 B, 359.
1923 A, 126.
Kruizinga, P. 1924 A, 311.
Loomis, F. B. 1900 A, 297 (Enchodidæ).
Regan, C. T. 1909 B, 82.
1911 B, 120.
1911 D, 320.
Schlosser, M. 1917 A, 139, 140 ("enchodontiden").
Stromer, E. 1917 A, 23.
Woodward, A. S. 1901 A, 6, 189.
1906 C, 280.
Zittel and Koken 1911 A, 125.
Zittel and Schlosser 1923 A, 130.
Zittel and Woodward 1902 A, 98.

ENCHODUS Agassiz. Type *Esox lewesiensis* Mantell.

Agassiz, L. 1843 B (1835), 55 (feuilleton).
Hay, O. P. 1902 A, 388.
Andreae, A. 1904 A, 309.
Berry, E. W. 1916 A, 356.
Bronn, H. G. 1848 A, 459.
1849 A, 676.
Cope, E. D. 1880 U, 147.
Coulon, L. 1903 A, 153.
Davis, J. W. 1887 C, 601 (Eurygnathus, type *E. ferox* Davis).
Dollo, L. 1892 F, 183, figs. 2-4.
Eastman, C. R. 1912 B, 377.
Fowler, H. W. 1911 A, 157.
Gervais, P. 1852 A, explan. pl. lxx.
1859 A, 522, pl. lxx, fig. 3.
Giebel, C. G. 1855 A, 104.
Green, W. R. 1913 A, 71.
Hay, O. P. 1903 A, 66.
Heckel, J. J. 1849 in Russegger's Reisen, ii, pt. iii, 342 (Isodus, type *I. sulcatus* Heckel).
Hennig, E. 1912 A, 490 (Euchodus).
Kramberger, D. G. 1881 A, 373 (Solenodon, type *S. neocomiensis* Kramb.).
1885, Rad. Jugoslav. Akad., lxxii, 18 (Holcodon, type *H. lycodon*).
Krause, P. G. 1901 A, 120 (Enchodus, Phasganodus).
Kruizinga, P. 1924 A, 297, 309.
Mantell, G. A. 1844 A, 668.
Marck, W. 1858. Zeitschr. deutch. geol. Gesellsch., x, 248 (Ischyrocephalus, type *I. gracilis* Marck).
Priem, F. 1908 B, 52, pl. i, figs. 10, 11.
Sternberg, C. H. 1881 B, 4.
Storms, R. 1891 A, 142, 152.
1892 A, 1.
Woodward, A. S. 1901 A, 190.
1907 A, 193.
1912 A (1902), 55.
1912 A (1903), 57, pl. xiv; text-figs. 13, 14.
Zittel and Koken 1911 A, 126.
Zittel and Schlosser 1923 A, 130.
Zittel and Woodward 1902 A, 98.

Enchodus amicrodus Stewart.

Hay, O. P. 1902 A, 388.
Green, W. R. 1913 A, 71, 81, 91, pl. x.
Woodward, A. S. 1901 A, 203.
Upper Cretaceous (Niobrara); Kansas.

Enchodus anceps Cope.

Hay, O. P. 1902 A, 389.
Woodward, A. S. 1901 A, 203.
Upper Cretaceous (Niobrara); Kansas.

Enchodus calliodon Cope.

Hay, O. P. 1902 A, 389.
Woodward, A. S. 1901 A, 203.
Upper Cretaceous (Niobrara); Kansas.

Enchodus carinatus (Cope).

Hay, O. P. 1902 A, 389.
Woodward, A. S. 1901 A, 204.
Upper Cretaceous (Niobrara); Kansas.

Enchodus dirus (Leidy).

Hay, O. P. 1902 A, 390 (Cimolichthys).
Berry, E. W. 1916 A, 357, pl. ix, figs. 3-5.
Green, W. R. 1913 A, 77, 81, 88, pl. vi, figs. 3, 4.
Woodward, A. S. 1901 A, 204.
Cretaceous (Fox Hills); North Dakota: (Monmouth); Maryland.

Enchodus dolichus Cope.

Hay, O. P. 1902 A, 389.
Green, W. R. 1913 A, 71, 78, 82, 95, pls. xi-xiv; pl. xv, figs. 10, 12.
Hay, O. P. 1903 A, 72, text-figs. 52, 53.
Hussakof, L. 1908 A, 71, fig. 38.
Woodward, A. S. 1901 A, 204.
Upper Cretaceous (Niobrara); Kansas.

Enchodus ferox Leidy.

Hay, O. P. 1902 A, 389 (E. ferox, E. pressidens).
Fowler, H. W. 1911 A, 158, figs. 95-97 (E. ferox); 161 (E. pressidens).
Green, W. R. 1913 A, 81.
Hay, O. P. 1903 A, 68, text-fig. 50.
Hussakof, L. 1908 A, 72.
Woodward, A. S. 1901 A, 204 (E. ferox), 205 (E. pressidens).
Upper Cretaceous (Navesink, Woodbury, Manasquan?); New Jersey.

Enchodus gentryi (Cope).

Hay, O. P. 1902 A, 389.
Fowler, H. W. 1911 A, 163.
Hussakof, L. 1908 A, 72.
Woodward, A. S. 1901 A, 615 (Phasganodus).
Miocene (Kirkwood); New Jersey.

Enchodus gladiolus Cope.

Hay, O. P. 1902 A, 389.
1903 A, 75, text-figs. 56, 57.
Hussakof, L. 1908 A, 72.
Woodward, A. S. 1901 A, 204.
Cretaceous (Niobrara); Kansas.

Enchodus oxytomus Cope.

Hay, O. P. 1902 A, 389.
Fowler, H. W. 1911 A, 164.
Woodward, A. S. 1901 A, 204.
Upper Cretaceous (Navesink); New Jersey.

Enchodus parvus Stewart.

Hay, O. P. 1902 A, 389.
Woodward, A. S. 1901 A, 204.
Upper Cretaceous (Niobrara); Kansas.

Enchodus petrosus Cope.

Hay, O. P. 1902 A, 389.
Green, W. R. 1913 A, 75, 81, 82; pls. i-v; pl. vi, figs. 1, 2; pls. vii-ix; pl. xv, figs. 14, 15.
Hay, O. P. 1903 A, 70, text-figs. 51, 59, 62.
Hussakof, L. 1908 A, 73.
Woodward, A. S. 1901 A, 205.
Cretaceous (Niobrara); Kansas.

Enchodus sævus Hay.

Hay, O. P. 1903 A, 76, text-figs. 58, 60, 61, 63, 64, 65.
Green, W. R. 1913 A, 73, 82, pls. viii, ix (Syn. of *E. petrosus*).
Hussakof, L. 1908 A, 73.
Zittel and Schlosser 1923 A, 130, fig. 227.
Cretaceous (Niobrara); Kansas.

Enchodus semistriatus Marsh.

Hay, O. P. 1902 A, 389.
Fowler, H. W. 1911 A, 162.
Woodward, A. S. 1901 A, 205.
Upper Cretaceous (Navesink?); New Jersey.

Enchodus serrulatus Fowler.

Fowler, H. W. 1911 A, 162, fig. 98. Upper Cretaceous (Manasquan); New Jersey.

Enchodus shumardi Leidy.

Hay, O. P. 1902 A, 389 (E. shumardii).
Green, W. R. 1913 A, 71, 82, 104, pl. xv, figs. 1-13 (E. shumardii).
Lambe, L. M. 1904 C, 21, 36, 44.
McInnes, W. 1913 A, 67.
Merrill, G. P. 1907 A, 11.
Woodward, A. S. 1901 A, 205.
Cretaceous (Niobrara); Manitoba.

Enchodus tetræcus Cope.

Hay, O. P. 1902 A, 389.
Fowler, H. W. 1911 A, 163, fig. 99.
Hay, O. P. 1903 A, 74, text-figs. 54, 55.
Hussakof, L. 1908 A, 73.
Woodward, A. S. 1901 A, 205.
Upper Cretaceous (Navesink?); Delaware, New Jersey.

Enchodus sp. indet.

Hay, O. P. 1902 A, 389.
Cockerell, T. D. A. 1919 A, 184. Upper Cretaceous (Colorado shale); Montana.
Fowler, H. W. 1911 A, 164, 165, figs. 100-102 (Various undetermined species from New Jersey).
Gidley, J. W. 1926 F, 192, pl. lxxi.
Upper Cretaceous (Ripley); Tennessee.

TETHEODUS Cope. Type *T. pephredo* Cope.

Hay, O. P. 1902 A, 389.
Krause, P. G. 1901 A, 120.
Woodward, A. S. 1901 A, 190 (Syn? of Enchodus).
1912 A (1902), 55 (Syn? of Enchodus).

Tetheodus pephredo Cope.

Hay, O. P. 1902 A, 389.
Woodward, A. S. 1901 A, 205.
Cretaceous (Niobrara); Kansas.

HALECODON Cockerell. Type *H. denticulatus* Cockerell.

Cockerell, T. D. A. 1919 A, 183.

Halecodon denticulatus Cockerell.

Cockerell, T. D. A. 1919 A, 183, pl. xxxvi, fig. 7.
Upper Cretaceous (Aspen); Wyoming.

Superfamily OSTEOGLOSSOIDÆ, new form.

Gill, T. 1893 A, 130 (Osteoglossoidea).
Jordan, D. S. 1923 A, 123 (Osteoglossoidea).
Regan, C. T. 1909 B, 77 (Osteoglossoidei).

OSTEOGLOSSIDÆ Bonaparte.

Bonaparte, C. L. 1846, Cat. Met. Pesci Europei, 7.
Hay, O. P. 1902 A, 393.
Allis, E. P. 1909 A, 214 (Osteoglossum).
Arldt, T. 1907 D, 670.
1912 A, 679, 716.
1923 A, 498 ("osteoglossiden").
Baudelot, E. 1873 A, 110 (Osteoglossum).
Boulenger, G. A. 1901 C, 514.
1904 A, 164.
1904 D, 555, 749.
1917 B, 330.
Bridge, T. W. 1896 A, 644.
Carus, V. 1875 A, 576 (Osteoglossoidei).
Cockerell, T. D. A. 1910 D, 111.
1911 D, 39.
1913 B, 125.
Cope, E. D. 1872 C, 329, 333.
Dean, Gudger, Henn 1923 A, 693.
Eastman, C. R. 1917 A, 288.
Frost, G. A. 1925 A, 159, pl. xii.
Gill, T. 1885 C, 142.
Goodrich, E. S. 1909 A, 390.
Gregory, W. K. 1907 D, 469.
Günther, A. C. 1866 A, 377.
1881 A, 693.
Jordan, D. S. 1885 A, 143.
1905 A, ii, 56, 584.
1907 B, 282, 379.
1923 A, 123.
1925 A, 232 (Osteoglossidæ, Phareodontidæ).
Leunis and Ludwig 1883 A, 755.
Loomis, F. B. 1921 A, 194.
Meek, A. 1916 A, 59.
Rauther, M. 1913 A, 1100.
Regan, C. T. 1910 A, 356.
1916 B, 546.
Ridewood, W. G. 1904 A, 61.
1905 C, 252.
Schlosser, M. 1917 A, 144.
Siebenrock, F. 1901 A, 108.
Steinmann, G. 1927 A, 81 ("osteoglossiden").
Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 7 (Phareodontidæ).
Terra, P. 1911 A, 209.
Wallace, A. R. 1876 A, ii, 454.
Woodward, A. S. 1898 B, 117.

Woodward, A. S. 1899 C, 361.
1901 A, vii, 4, 73.
1923 B, 297.
Zittel and Koken 1911 A, 121.
Zittel and Schlosser 1923 A, 126.
Zittel and Woodward 1902 A, 97.

PHAREODUS Leidy. Type *P. acutus* Leidy.

Hay, O. P. 1902 A, 393.
Allis, E. P. 1923 A, 46 (Osteoglossum).
Arldt, T. 1923 A, 498.
Boulenger, G. A. 1901 C, 515 (Dapedoglossus).
1904 D, 557 (Dapedoglossus).
Cockerell, T. D. A. 1910 D, 111 (Dapedoglossus).
Eastman, C. R. 1917 A, 288 (Dapedoglossus).
Haseman, J. D. 1912 A, 98 (Dapedoglossus).
Jordan, D. S. 1905 A, ii, 56, 586.
1907 B, 282.
1923 A, 123.
1925 A, 232.
Matthew, W. D. 1915 A, 298 (Dapedoglossus).
Meek, A. 1916 A, 59 (Dapedoglossus).
Seeley, H. G. 1886 A, 412 (Dapedoglossus).
1899 C, 361 (Dapedoglossus).
Woodward, A. S. 1901 A, 74 (Dapedoglossus).
Zittel and Woodward 1902 A, 97.

Phareodus acutus Leidy.

Hay, O. P. 1902 A, 393.
Cockerell, T. D. A. 1908 C, 175.
Jordan, D. S. 1907 B, 283.
1925 A, 233.
Woodward, A. S. 1901 A, 75 (Dapedoglossus).
Middle Eocene (Bridger); Wyoming.

Phareodus æquipinnis (Cope).

Hay, O. P. 1902 A, 393.
Cockerell, T. D. A. 1908 C, 175.
Hussakof, L. 1908 A, 87.
Jordan, D. S. 1907 B, 283.
Merrill, G. P. 1907 A, 9 (Dapedoglossus).
Woodward, A. S. 1901 A, 75 (Dapedoglossus).
Lower Eocene (Green River); Wyoming.

Phareodus encaustus (Cope).

Hay, O. P. 1902 A, 393.
Cockerell, T. D. A. 1908 C, 175.
Hussakof, L. 1908 A, 87.
Jordan, D. S. 1905 A, ii, 57.
1907 B, 283.
Woodward, A. S. 1901 A, 76 (Dapedoglossus).
Lower Eocene (Green River); Wyoming.

Phareodus testis Cope.

Hay, O. P. 1902 A, 393.
Boulenger, G. A. 1904 D, 556, fig. 335 (Dapedoglossus).
Cockerell, T. D. A. 1908 C, 175.
1911 D, 39.
Eastman, C. R. 1917 A, 288 (Dapedoglossus).
Hussakof and Bryant 1919 A, 198.
Jordan, D. S. 1905 A, ii, 56, fig. 45.
1907 B, 283, fig. 216.
1925 A, 232, 233.
Merrill, G. P. 1907 A, 9, 10 (Dapedoglossus).
Tanner, V. M. 1925, Bull. Univ. Utah, XIV, No. 6, 7 (Syn. of P. acutus).
Woodward, A. S. 1901 A, 75 (Dapedoglossus).
Lower Eocene (Green River); Wyoming.

Phareodus? sp. indet.

Jordan, D. S. 1907 A, 126. Upper Cretaceous (Chico); California.

EURYCHIR Jordan. Type *E. lindleyi* Jordan.

Jordan, D. S. 1925 A, 232.

Eurychir lindleyi Jordan.

Jordan, D. S. 1925 A, 232, pls. xxii, xxiii. Upper Cretaceous (Niobrara); Kansas.

Superfamily SALMONOIDÆ, new form.

Frost, G. A. 1925 A, 156 (Salmonoidea).
Jordan, D. S. 1905 A, ii, 41, 61 (Salmonoidea).
Jordan, D. S. 1907 B, 268 (Salmonoidea).
1923 A, 124 (Salmonoidei).

SALMONIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 95, 115.
Hay, O. P. 1902 A, 392.
Agassiz, L. 1832 A, 142 ("salmoniden").
1856 C, 63.
Agassiz and Vogt 1845 A ("salmones").
Allis, E. P. 1909 A, 201.
Arldt, T. 1907 D, 680.
1912 A, 716, 762.
1923 A, 503 ("salmoniden").
Belling, D. E. 1912 A, 60 ("salmoniden").
Bonaparte, C. L. 1833 B, 1201.
1838 B, 132.
Boulenger, G. A. 1895 B, 299.
1904 A, 164.
1904 D, 565, 754.
1917 B, 329, 330.
1917 D, 1043.
Braus, H. 1906 A, 173 ("salmoniden").
1919 A, 30.
Bridge, T. W. 1896 A, 550.
Brohl, E. 1909 A, 372 ("salmoniden").
Bronn, H. G. 1849 A, 780 seq. (Salmones).
Bruch, C. 1862 A.
Carus, V. 1875 A, 573 (Salmonoidei).
Carus and Engelmann 1861 A, 1798.
Cockerell, T. D. A. 1913 B, 125.
Collinge, W. E. 1895 B, 290.
Cope, E. D. 1871 T, 455.
Cunningham, J. T. 1886 A, 222.
1897 A, 493.
1912 A, 246, 265.
Cuvier, G. 1805 A ("saumons").
Dahl, K. 1909 A, 765.
Dawson, J. W. 1894 C, 267.

Dean, Gudger, Henn 1923 A, 699.
Dietz, P. A. 1917 A, 85.
Derjugin, K. 1910 A, 586 (Salmo).
Duméril, A. 1856 A, 445 ("salmonides").
Ebner, V. 1896 A, 127 ("salmoniden").
Fitzinger, L. J. 1873 A, 37 (Salmones).
Fulton, T. W. 1906 A, 76.
Fryd, C. 1901 A, 33.
Gaupp, E. 1898 B, 823 ("salmoniden").
1903 A, 119, fig. 1 (Salmo).
1911 A, 414 (Salmo).
Gill, T. 1875 B, 252.
1885 C, 146.
Goette, A. 1879 A, 128 ("salmoniden").
Goodrich, E. S. 1909 A, 393.
Gregory, W. K. 1907 D, 471.
Haller, B. 1906 A, 233 ("salmoniden").
Hase, A. 1907 A, 633 ("salmoniden").
Hoek, P. P. C. 1910 A, 432 ("zalmen").
Hoernes, R. 1886 A, 530.
Hubbs, C. L. 1926 A, 73 ("salmonoids").
Huxley, T. H. 1855 A, 84.
1859 H, 38.
1883 B, 564, 567.
Jaekel, O. 1906 A, 24, fig. 16 (Salmo).
Johnston, H. W. 1905 A, 63 ("salmon").
1907 A, 54 ("salmon").
1910 A, 21 ("salmon").
Jordan, D. S. 1885 A, 146.
1905 A, ii, 61, 590.
1907 B, 285.
1923 A, 124.
Jordan and Gilbert 1882 A, 288.
Klaatsch, H. 1890 A, 155 ("salmoniden").
Klein, E. F. 1868 A ("salmonen").
1884 A, 135, 138, 147, 148, 153, 169, 199, 228, 246, 248.
1885 A, 109, 130, 145, 188, 212, 241.
1886 A, 224, 258, 292.
Kner, R. 1861 A, 244 (Salmonides).
Kolzoff, N. K. 1896 A, 516.
Köstlin, O. 1844 A ("salmonen").
Krause, P. G. 1901 A, 120 ("salmoniden").
Leunis and Ludwig 1883 A, 747.
Lönnberg, E. 1902 A (Salmones).
Macdonald, W. 1863 A, 63.
McMurrich, J. P. 1910 A, 23.
Mayhoff, H. 1914 A, 403 ("salmoniden").
Meckel, J. F. 1825 A ("lachse").
Meek, A. 1916 A, 112.
Miall, L. C. 1872 A, 26.
Milne, J. A. 1913 A, 572 ("salmon").
Müller, J. 1841 B, cliii ("salmonen").
1845 A, 102, 136 (Salmones).
Owen, R. 1868 A, 907.
Pouchet, G. 1878 A, 59 (Salmones).
Pychlau, W. 1908 A, 693 ("salmoniden").
Rauther, M. 1913 A, 1100.
Regan, C. T. 1910 A, 356.
1913 D, 289.
1914 A, 405.
Richardson, J. 1836 A, 137 (Salmonoidea).
Ridewood, W. G. 1904 A, 58.
Ryder, J. 1886 A, 72 ("salmonoids").
Sagemehl, M. 1884 A, 101 ("salmoniden").
Scheel, C. 1893 A, 1 ("salmoniden").
Shepherd, C. E. 1914 A, 267.
Siebenrock, F. 1901 A, 108.
Stannius, H. 1854 A (Salmones).
Starks, E. C. 1904 B, 601 ("salmonoids").
Stephan, P. 1900 A, 301 ("salmones").
Szily, A. 1907 A, 347 ("forelle").
Terra, P. 1911 A, 210.
Trouessart, E. L. 1906 A, 212.
Turnbull, H. 1909 A, 1095, 1119, 1175.
Vogel, R. 1909 A, 499 ("salmoniden").
Wallace, A. R. 1876 A, ii, 447.
Wagner, R. 1843 A ("lachse").
Willcox, M. A. 1899 A, 153.
Williamson, W. C. 1851 A, 694.
Woodward, A. S. 1901 A, viii, 5, 159.
1922 C, 98.
Zittel and Koken 1911 A, 121.
Zittel and Schlosser 1923 A, 126.
Zittel and Woodward 1902 A, 97.

Salmo Linn. Type *S. salar* Linn.

Linnæus, C. 1758 A, 308.
Abel, O. 1919 A, 46, figs. 20, 22.
Agassiz and Vogt 1845 A, 1-196, pls. A-O.
Allis, E. P. 1898 A, 428.
1898 B, 95.
1905 A, 452, figs. 24-26.
1909 A, 214.
1919 C, 255.
1922 B, 201.
Baudelot, E. 1873 A, 97.
Beer, G. R. 1924 C, 316, figs. 27-29.
1926 A, 297, figs. 50-61, 115, 121, 132.
Belling, D. E. 1912 A, 50.
Böker, H. 1913 A, 361, pls. xxiv-xxvii; text-figs. 1-10.
Born, J. 1827 A, 190.
Boulenger, G. A. 1895 B, 299.
1904 D, 567, 754.
1917 D, 1041.
Braus, H. 1906 A.
Bronn, H. G. 1848 B, 1109.
Bruch, C. 1862 A.
Carlsson, A. 1894 A, 217, 220.
Cartier, O. 1875 A, 70, pl. iv, figs. 5-9.
Cockerell, T. D. A. 1911 F, 370.
1913 B, 125.
Cockerell and Allison 1909 A, 158, fig. 1.
Collinge, W. E. 1895 B, 290, pl. xx, figs. 13-15.
Cope, E. D. 1891 N, 21, fig. 9.
Cunningham, J. T. 1886 A, 221.
1912 A, 241.
Cuvier, G. 1815 A, 115.
Dahl, K. 1909 A, 766, fig. 4.
Dean, Gudger, Henn 1923 A, 699.
Derjugin, K. 1909 A, pl. vi, figs. 56-58.
1910 A, 609.
Dietz, P. A. 1914 A, 102.
Duméril, A. 1856 A, 446.
Edgeworth, F. H. 1926 A, 185, figs. 19, 20.
Esdaile, P. C. 1912 A.
1913 A, 1 ("salmon").
Fraas, E. 1913 D, lxiii ("lachse").
Frost, G. A. 1913 A, 221.
Fulton, T. W. 1906 A, 76, pl. ii B.
Gaupp, E. 1899 A, 1026, figs. 1, 2 ("lachs").
1903 A, 119, fig. 1.

Gaupp, E. 1905 D, 919.
1906 B, 661.
1911 A, 414.
Gegenbaur, C. 1866 A, 122 ("lachse").
1867 B, 419, pl. ix, fig. 16.
Giebel, C. G. 1855 A, 108.
Gill, T. 1885 C, 158.
Goetsch, W. 1920 A, 13, 15.
Goette, A. 1879 A, 134.
1901 A, 559.
Goodrich, E. S. 1904 A, 478.
1906 A, 347.
1909 A, 516, figs.
Haller, B. 1906 A, 235, pl. xvi, figs. 1-7; pl. xvii, figs. 13-16; text-figs. i-iv.
Harrison, R. G. 1893 A, 249.
1894 A, 59.
Hase, A. 1907 A.
Heckel, J. 1850 A, 364.
1850 B, 146.
Heilprin, A. 1887 A, 68, 69, 288.
Heronimus, C. 1911 A, 199, figs. 6-8.
Hill, C. 1899 A, 356, figs. 1-10.
1900 A, 402, pls. xxviii, xxx.
Hoek, P. P. C. 1909 A, 485, pls. i, ii.
1910 A, 432.
Hollard, H. 1864 B, 249 ("saumon").
Hutton, J. A. 1909 A, pls. i-xiv.
1910 A, pls. i-xxx.
Huxley, T. H. 1859 H, 37.
1883 B, 568.
Jaekel, O. 1906 A, 24, fig. 16.
Johnston, H. W. 1905 A, pls. i-vi ("salmon").
1907 A, 54, pls. i-v ("salmon").
1910 A, 21 ("salmon").
Jordan, D. S. 1885 A, 158.
1905 B, 547.
Jordan and Evermann 1917 A, 14.
Jordan and Gilbert 1882 A, 309.
Kesteven, H. L. 1922 A, 315.
Kindred, J. E. 1919 A.
1921 A, 427.
Kingsley, J. S. 1894 A, 639.
1925 A, 105, 225, figs. 113, 236.
Klein, E. F. 1879 A, 69, 70, 107.
1884 A, 132, 148, 156, 169, 228, 242, pl. ii.
1885 A, 212, 241.
1886 A, 224, 258, 292.
Kner, R. 1861 A, 245.
Köstlin, O. 1844 A.
Kolzoff, N. K. 1896 A, 515, fig. 2.
Lebedinsky, N. G. 1917 A, 315.
Leunis and Ludwig 1883 A, 748.
Locy, W. A. 1894 A, 179.
McMurrich, J. P. 1883 A, 634.
Masterman, A. T. 1913 A, 1-111, pls. i-iv ("salmon").
Meek, A. 1916 A, 112.
Mivart, St. G. 1879 B, 540, fig. 10 ("salmon").
Noorden, C. 1883 A, 235, pl. x.
Norman, E. W. 1926 A, figs. 41, 52.
Owen, R. 1845 B, 143, pl. xlviii, fig. 9.
1868 A, 907.
Paget and Savage 1916 A, 258 ("salmon").
Parker, W. K. 1879 C, 341 ("salmon").
Parker and Haswell 1897 A, 183, figs. 806-822.
Pehrson, T. 1922 A, 9.
Pychlau, W. 1908 A, 693, pls. xxv, xxvi.
Rauther, M. 1913 A, 1065, figs. 12-14, 28.
Reynolds, S. H. 1897 A, 87, 95, 131.
Richardson, J. 1836 A, 137.
Sagemehl, M. 1884 A, 78 ("lachse").
Schauinsland, H. 1906 A.
Schleip, W. 1904 A, 334.
Schmalhausen, J. J. 1912 A, 545, 570, pls. xvi, xviii.
1913 C, pls. ii, v.
Schmid-Monnard, C. 1883 A, 101, pls. vi, vii.
Sewertzoff, A. N. 1926 D, 87, figs. 17, 18.
Siebenrock, F. 1901 A, 108.
Sörensen, W. 1897 A, 180.
Stannius, H. 1849 A, 538.
1854 A.
Stöhr, P. 1882 A, 76, pls. ii, iii.
Swinnerton, H. W. 1905 A, 364, pl. xxiii.
Taylor, H. F. 1916 A, 298.
Thilo, O. 1896 A, 342 ("lachs").
1913 A, 293 ("lachs").
Tichomirow, A. 1885 A, 533.
Turnbull, H. 1909 A, 1095, 1119, 1175, fig.
Uhlmann, E. 1921 A, 303, 317, 324.
Vogel, R. 1909 A, 505.
Wagner, R. 1843 A.
Wallace, A. R. 1876 A, ii, 447.
Walther, J. 1882 A, 75 ("lachse").
Willcox, M. A. 1899 A, 153.
Williamson, W. C. 1851 A, 694.
Winslow, G. M. 1898 A, 184.
Zittel and Koken 1911 A, 121.
Zittel and Schlosser 1923 A, 126, fig. 23.

Salmo salar Linn.

Linnæus, C. 1758 A, 308.
Allis, E. P. 1909 A, 214.
Boulenger, G. A. 1917 D, 1041.
Cockerell, T. D. A. 1913 B, 125.
Collinge, W. E. 1895 B, 290, pl. xx, fig. 15.
Dawson, J. W. 1894 C, 267 (This species?).
Esdaile, P. C. 1912 A, 6 pls.
1913 A, 1 ("salmon").
Frost, G. A. 1925 A, 157, pl. xii.
Gill, T. 1885 C, 158, fig. 99.
Harrison, R. G. 1893 A, 249, pls. xvi-xviii.
Jordan, D. S. 1885 A, 158, fig. 99.
1905 B, 546 ("salmon").
Jordan and Evermann 1896 A, 487.
Jordan and Gilbert 1882 A, 311.
Lambe, L. M. 1904 C, 39, 44.
McMurrich, J. P. 1910 A, 23.
Milne, J. A. 1913 A, 579, figs. 99-100.
Reynolds, S. H. 1897 A, 87, figs. 9-11.
Richardson, J. 1836 A, 145.
Schleip, W. 1904 A, 334, figs.
Shepherd, C. E. 1910 B, 295, pl. i, fig. 14.
1914 A, 267.
Stannius, H. 1854 A, 62.
Stöhr, P. 1882 A, 76, pls. ii, iii.
Willcox, M. A. 1899 A, 151.

Recent; North Atlantic, ascending rivers: Pleistocene (Late); Quebec.

ONCORHYNCHUS Suckley. Type *Salmo gorbuscha* Walbaum.

Suckley, G. 1861, Ann. Lyc. Nat. Hist. N. Y., VII, 312.
Arldt, T. 1923 A, 503, 504.
Boulenger, G. A. 1917 B, 329.
Cockerell, T. D. A. 1913 B, 125.
Cunningham, J. T. 1886 A, 221.
1912 A, 310.
Dean, Gudger, Henn 1923 A, 630, 631.
Frost, G. A. 1925 A, 158, pl. xii.
Gilbert, C. H. 1913 A, 1.
1914 A, 1-22.
Gill, T. 1885 C, 151.
Jordan, D. S. 1885 A, 151.
1905 A, ii, 68, 583.
1907 A, 137.
1919 B, 299.
Jordan and Gilbert 1882 A, 304.
Jordan and Evermann 1896 A, 474.
McMurrich, J. P. 1910 A, 24.
1913 A, 9.
Meek, A. 1916 A, 126.
Milne, J. A. 1913 A, 572.
Regan, C. T. 1914 A, 407.

Oncorhynchus tschawytscha (Walbaum).

Walbaum, J. J. 1792, Artedi Piscium, 71 (Salmo).
Creaser, C. W. 1926 A, 21, 37.
Gilbert, C. H. 1913 A, pls. iv-vii; pl. viii, fig. 15, pl. ix; pl. x, fig. 18; pl. xiv, fig. 25.
1914 A, 11, pls. iv-x, xiv.
Gill, T. 1885 C, 152, fig. 98.
Hay, O. P. 1927 D, 241.
Jordan, D. S. 1885 A, 152, fig. 98.
1905 A, ii, 69, figs.
1907 A, 137, figs. 27-29. (This species?).
Jordan and Gilbert 1882 A, 306, 890 (O. tchawytcha).
Jordan and Evermann 1896 A, 479.
McMurrich, J. P. 1910 A, 24.
1913 A, 17, pls. v, vi; text-figs. 4, 5.
Milne, J. A. 1913 A, 572, 594, figs. 95, 96, 102, 109-111.
Recent; California to Alaska and China: Pleistocene (Equus beds); Oregon.

CRISTIVOMER Gill and Jordan. Type *Salmo namaycush* Walbaum.

Gill and Jordan. 1878, Bull. U. S. Nat. Mus., xii, 69.
Dean, Gudger, Henn 1923 A, 558.
Hussakof, L. 1916 B, 685.
Jordan, D. S. 1905 A, ii, 114, 565.
Jordan and Evermann 1896 A, 504.

Cristivomer namaycush (Walbaum).

Walbaum, J. J. 1782, Artedi Piscium, 68 (Salmo).
Allis, E. P. 1898 A, 434 (Salvelinus).
Baker, F. C. 1920 A, 282, 393.
Gill, T. 1885 C, 167 (Salvelinus).
Hay, O. P. 1923 A, 112, 344 (Christivomer, *errore*).
Hussakof, L. 1916 B, 685.
Jordan, D. S. 1905 A, ii, 114, fig. 78.
Jordan and Evermann 1896 A, 504.
Meek, A. 1916 A, 134.
Regan, C. T. 1914 A, 408, fig. 3 (Salvelinus).
Richardson, J. 1836 A, 179, pl. lxxxv (Salmo).
Recent; New England to Alaska in the larger lakes: Pleistocene (Sangamon); Wisconsin.

RHABDOFARIO Cope. Type *R. lacustris* Cope.

Hay, O. P. 1902 A, 392.
Dean, Gudger, Henn 1923 A, 628.
Jordan, D. S. 1919 B, 356.
Woodward, A. S. 1901 A, 160.

Rhabdofario lacustris Cope.

Hay, O. P. 1902 A, 392.
1927 D, 265, 268.
Jordan, D. S. 1905 A, ii, 62, 118.
1907 B, 286.
Pleistocene (Idaho); Idaho.

Rhabdofario sp. indet.

Hay, O. P. 1927 D, 104, 265. Pleistocene; Idaho.
Russell, I. C. 1902 A, 56. Pleistocene (Idaho); Idaho.

CYCLOLEPIS Geinitz. Type *C. agassizi* Geinitz.

Geinitz, H. B. 1868 A, 39, pl. ii, figs. 1, 2.
Cockerell, T. D. A. 1919 A, 181.
Jordan, D. S. 1919 B, 349.

Cyclolepis stenodinus Cockerell.

Cockerell, T. D. A. 1919 A, 181, pl. xxxv, fig. 16.
Upper Cretaceous (Fox Hills); Wyoming.

LEUCICHTHYOPS Cockerell. Type *L. vagans* Cockerell.

Cockerell, T. D. A. 1919 A, 180.

Leucichthyops vagans Cockerell.

Cockerell, T. D. A. 1919 A, 180, pl. xxxiv, fig. 13; pl. xxxv, figs. 1-15.
Reeside, J. B. 1923 A, 205 (Leuchichthyops).
1924 A, 12 (Leuchichthyops); pl. iii (Leucichthys).
Upper Cretaceous (Colorado group); Colorado, Wyoming.

ARGENTINIDÆ Gill.

Gill, T. 1885 C, 144.
Cockerell, T. D. A. 1913 B, 126.
Dean, Gudger, Henn 1923 A, 633 (Argentininæ).
Gill, T. 1862 B, 14 (Argentinæ).
1893 A, 131.
1893 B, 112.

Goode and Bean 1895 A, 51.
Jordan, D. S. 1885 A, 145.
1905 A, ii, 122.
1923 A, 124 (Argentinidæ, Osmeridæ).
Jordan and Evermann 1896 A, 519.
Jordan and Gilbert 1822 A, 288 (Argentininæ).
Meek, A. 1916 A, 138 (Argentinæ).
Regan, C. T. 1911 D, 320.
1913 D, 289.

MALLOTUS Cuvier. Type *Clupea villosa* Gmelin=*Salmo grœndlandicus* Bloch.

Hay, O. P. 1902 A, 392.
Arldt, T. 1923 A, 503.
Bronn, H. G. 1848 A, 700.
Cunningham, J. T. 1886 A, 221.
Dean, Gudger, Henn 1923 A, 688.
Duméril, A. 1856 A, 448 ("capelan").
Giebel, C. G. 1855 A, 109.
Gill, T. 1862 B, 15.
1885 C, 145.
Hoernes, R. 1886 A, 530.
Jordan and Evermann 1917 A, 130.
Jordan and Gilbert 1882 A, 291.
Leunis and Ludwig 1883 A, 751.
Stannius, H. 1854 A.
Wallace, A. R. 1876 A, ii, 447.
Woodward, A. S. 1901 A, 160.

Mallotus villosus (Müller).

Hay, O. P. 1902 A, 392.
Agassiz, L. 1848 B, 42.
Ami, H. M. 1897 A, 21, 22, 23.
1901 C, 53, 54.
Baker, F. 1920 A, 182.
Billings, E. 1856 A, 337, 345.
Boulenger, G. A. 1904 D, 568, fig. 344.
Bronn, H. G. 1849 A, 672.
Clapp, F. G. 1908 A, 522.
Coleman, A. P. 1901 B, 131.
1901 C, 224.
Cunningham, J. T. 1886 A, 224.
Dawson, G. M. 1857 A, 408, 415.
1863 F, 916.
Dawson, J. W. 1872 B, 402.
1872 C, 57, 98.
1894 C, 31, 58, 203, 265, 266, pl. viii, fig. 1.
Deecke, W. 1913 A, 84.
Fraser, C. M. 1915 A, 116, pl. x, figs. 36-39.
Gould, A. A. 1848 A, 64.
Haug, E. 1911 A, 1876.
Hay, O. P. 1923 A, 489.
1927 D, 283.
Johnston, W. A. 1917 A, 25 ("Mallotus").
Jordan, D. S. 1885 A, 145.
1905 A, ii, 126, fig. 85.
Jordan and Gilbert 1882 A, 291.
Lambe, L. M. 1904 C, 39, 44.
1914 F, 298.
Mantell, G. A. 1844 A, 670.
Meek, A. 1916 A, 138.
Owen, R. 1860 E, 150.
Packard, A. S. 1867 A, 244.
Richardson, J. 1836 A, 187 [Salmo (Mallotus)].
Wiman, C. 1913 A, 153.
Woodward, A. S. 1901 A, 161.
Zittel and Koken 1911 A, 121.
Zittel and Schlosser 1923 A, 126.
Zittel and Woodward 1902 A, 97.
Recent; Arctic Ocean south to Cape Cod and Alaska: Pleistocene; Canada, Maine: Pleistocene?; Greenland.

OSMERUS Linnæus. Type *O. eperlanus* Linnæus.

Linnæus, C. 1858 A, 310 (Osmeri).
Arldt, T. 1923 A, 503.
Boulenger, G. A. 1917 D, 1044.
Cockerell, T. D. A. 1913 B, 126.
Dean, Gudger, Henn 1923 A, 693.
Frost, G. A. 1925 A, 158, pl. xii.
Fryd, C. 1901 A, 33, fig.
Gill, T. 1862 B, 15.
1885 C, 144.
Goödrich, E. S. 1909 A, 394, 513.
Günther, A. C. 1866 A, 166.
Hammarsten, O. D. 1911 A, 669, pl. ix, figs. 2, 3; text-figs. 1, 2, 4, 11.
Jordan, D. S. 1885 A, 144.
1905 A, ii, 123, 127.
Jordan and Evermann 1896 A, 522.
Jordan and Gilbert 1882 A, 292.
Klein, E. F. 1885 A, 212.
Leunis and Ludwig 1883 A, 751.
Masterman, A. T. 1913 B, 113, pls. i, ii.
Meek, A. 1916 A, 140.
Shepherd, C. E. 1910 B, 292, pl. i, fig. 13.
Stannius, H. 1854 A.

Osmerus mordax (Mitchill).

Mitchill, S. L. 1815, Trans. Lit. and Phil. Soc. N. Y., i, 446 (Atherina).
Cockerell, T. D. A. 1913 B, 126.
Coleman, A. P. 1901 C, 224.
Dawson, J. W. 1894 C, 265.
Hay, O. P. 1923 A, 287.
Jordan, D. S. 1885 A, 144, fig. 93.
1905 A, ii, 123, fig. 82.
Jordan and Evermann 1896 A, 523.
Jordan and Gilbert 1882 A, 293.
Lambe, L. M. 1904 C, 39, 44.
Recent; coast and rivers from Virginia to Gulf of St. Lawrence: Pleistocene (Leda clay); Ontario.

Osmerus sp. indet.

Eastman, C. R. 1917 A, 293, pl. xviii, fig. 5 (This genus?). Tertiary; Montana.

Order INIOMI Gill.

Gill, T. 1884, Proc. U. S. Nat. Mus., vii, 350.
Frost, G. A. 1926 A, 466, pl. xx.
Gill, T. 1893 A, 131.
Gregory, W. K. 1907 D, 451, 484, 485, 487.
Hubbs, C. L. 1919 B, 61.
Jordan, D. S. 1905 A, i, 405; ii, 129, 576.
1907 B, 352.
1923 A, 153.
Jordan and Evermann 1896 A, 530.
Regan, C. 1909 B, 83.
1911 B, 120.
1911 D, 320.
Starks, E. C. 1904 C, 254.

Superfamily MYCTOPHOIDÆ, new form.

Frost, G. A. 1926 A, 467, pl. xx (Myctophoidea).
Regan, C. T. 1911 B, 121 (Myctophoidea).

MYCTOPHIDÆ Gill.

Gill, T. 1893 B, 113.
Unless otherwise indicated the writers below cited use for this family the name Scopelidæ.
Allis, E. P. 1909 A, 201.
Arambourg, C. 1921 A, 233 (Myctophum).
Arldt, T. 1907 D, 681.
1923 A, 517 ("scopeliden").
Bassani, F. 1905 A, 19.
Boulenger, G. A. 1904 D, 611, 755.
Dean, Gudger, Henn 1923 A, 514 (Myctophidæ).
Frost, G. A. 1926 A, 467 (Myctophidæ).
Gill, T. 1885 C, 139.
Goode and Bean 1895 A, 70 (Myctophidæ).
Goodrich, E. S. 1909 A, 399.
Günther, A. C. 1864 A, 393.
1880 A, 606.
1881 A, 692.
Jordan, D. S. 1885 A, 139.
1905 A, II, 132, 582 (Myctophidæ); 134 (Rhinellidæ).
1923 A, 155 (Myctophidæ); 128 (Rhinellidæ).
Jordan and Evermann 1896 A, 550 (Myctophidæ).
Jordan and Gilbert 1882 A, 279.
Klein, E. F. 1879 A, 105 (Scopelidæ).
1884 A, 135, 145, 226.
1885 A, 145, 212, 241.
1886 A, 222, 258, 292.
Meek, A. 1916 A, 412, 414.
Müller, J. 1845 A, 102, 136 (Scopelini).
Norman, E. W. 1926 A, 441.
Rauther, M. 1913 A, 1101.
Regan, C. T. 1911 B, 128 (Myctophidæ).
Sagemehl, M. 1884 A, 100 ("scopeliden").
Schlosser, M. 1917 A, 140, 143, 148 ("scopeliden").
Shepherd, C. E. 1916 A, 182, 184, 204, fig. 157 (Scopelus).
Siebenrock, F. 1901 A.
Stannius, H. 1854 A (Scopolini).
Woodward, A. S. 1901 A, ix, 6, 235.
Zittel and Koken 1911 A, 130.
Zittel and Schlosser 1923 A, 131.
Zittel and Woodward 1902 A, 99.

RHINELLUS Agassiz. Type *R. furcatus* Agassiz.

Agassiz, L. 1843 B (1844), ii, 260.
Hay, O. P. 1902 A, 397 (Ichthyotringa).
Davis, J. W. 1887 C, 607.
Hay, O. P. 1903 A, 94.
Hennig, E. 1912 A, 490.
Hussakof, L. 1916 C, 348 (Ichthyotringa).
Jordan, D. S. 1905 A, ii, 134.
1919 B, 217.
1923 A, 128, 155 (Rhinellus, Ichthyotringa).
Pictet and Humbert 1856 A, 44.
Woodward, A. S. 1901 A, ix, 265 (Ichthyotringa a syn.).
Zittel, K. A. 1890 A, 286.
Zittel, Eastman, etc. 1902 A, 99.
Zittel and Koken 1911 A, 130 (Ichthyotringa a syn.).
Zittel and Schlosser 1923 A, 131.
Zittel and Woodward 1902 A, 99 (Ichthyotringa a syn.).

Rhinellus tenuirostris (Cope).

Hay, O. P. 1902 A, 397 (Ichthyotringa).
1903 A, 94, pl. iv, figs. 7, 8.
Hussakof, L. 1908 A, 95.
Woodward, A. S. 1901 A, 269.
Upper Cretaceous (Niobrara); S. Dakota.

SARDINIUS Marck. Type *Osmerus cordieri* Agassiz.

Hay, O. P. 1902 A, 391.
Cockerell, T. D. A. 1919 A, 184.
Hay, O. P. 1903 A, 91 (Leptosomus; preoccupied).
1903 G, 695 (Leptosomus).
Woodward, A. S. 1901 A, 247.
Zittel and Koken 1911 A, 130.
Zittel and Schlosser 1923 A, 131.

Sardinius? blackburnii Cope.

Hay, O. P. 1902 A, 391.
Woodward, A. S. 1901 A, 248 (Sardinius?).
Oligocene?; South Dakota.

Sardinius? imbellis Hay.

Hay, O. P. 1903 A, 93, pl. iv, fig. 9.
Hussakof, L. 1908 A, 96.
Cretaceous (Niobrara); South Dakota.

Sardinius lineatus Cope.

Hay, O. P. 1902 A, 391.
1903 A, 92, pl. iv, fig. 6; pl. v, fig. 2 (Leptosomus).
Hussakof, L. 1908 A, 79 (Leptosomus).
Woodward, A. S. 1901 A, 248.
Cretaceous (Niobrara); South Dakota.

Sardinius nasutulus Cope.

Hay, O. P. 1902 A, 391.
1903 A, 91, pl. iv, figs. 4, 5 (Leptosomus).
Hussakof, L. 1908 A, 79 (Leptosomus).
Woodward, A. S. 1901 A, 248.
Cretaceous (Niobrara); South Dakota.

Sardinius percrassus Cope.

Hay, O. P. 1902 A, 391.
1903 A, 92, pl. v, fig. 3 (Leptosomus).
Hussakof, L. 1908 A, 79 (Leptosomus).
Woodward, A. S. 1901 A, 248.
Cretaceous (Niobrara); South Dakota.

PARALEPIDIDÆ Gill

Gill, T. 1872 C, 16.
Bonaparte, C. L. 1840 A, 302 (Paralepidini).
Dollo, L. 1908 A, 59 (Paralepidæ).
Gill, T. 1885 C, 139.
Goode and Bean 1895 A, 97.
Jordan, D. S. 1905 A, ii, 136 (Paralepidæ).
1921 A, 250 (Paralepidæ).
1923 A, 154 (Paralepidæ).
Jordan and Evermann 1896 A, 599.
Jordan and Gilbert 1882 A, 276.
Regan, C. T. 1911 B, 125 (Sudidæ).

TROSSULUS Jordan. Type *T. exoletus* Jordan.

Jordan, D. S. 1921 A, 250.

Trossulus exoletus Jordan.

Jordan, D. S. 1921 A, 250, pl. viii, fig. *c*; pl. xxviii, fig. *a*.
Miocene (Monterey); California.

DRIMYS Jordan. Type *D. defensor* Jordan.

Jordan, D. S. 1925 B, 14.

Drimys defensor Jordan.

Jordan, D. S. 1925 B, 14.
Miocene (Monterey); California.

LESTICHTHYS Jordan. Type *L. porteousi* Jordan.

Jordan, D. S. 1921 A, 250.

Lestichthys porteousi Jordan.

Jordan, D. S. 1921 A, 250, pl. x, fig. *b*; pl. xxii, fig. *b*.
Miocene (Monterey); California.

Order HETEROMI Gill.

Gill, T. 1889 D, 1016.
Boulenger, G. A. 1904 D, 621.
Dean, Gudger, Henn 1923 A, 369, 572, 643.
Frost, G. A. 1926 A, 466, 479, pl. xx.
Gill, T. 1889 C, 1016 (Lyopomi).
1893 A, 133.
Goode and Bean 1895 A, 162.
Goodrich, E. S. 1909 A, 416 (Notacanthiformes).
Gregory, W. K. 1907 D, 451, 482.
Jordan, D. S. 1905 A, i, 405; ii, 157.
1907 B, 376.
1923 A, 128.
Jordan and Evermann 1896 A, 612.
Meek, A. 1916 A, 186.
Regan, C. T. 1909 B, 82.
1912 B, 841, 844.

Suborder DERCETIFORMES.

Jordan, D. S. 1923 A, 128 (Hoplopleuri, Dercetiformes).

STRATODONTIDÆ Cope.

Hay, O. P. 1902 A, 387.
Allis, E. P. 1909 A, 201.
Arldt, T. 1907 D, 151, 281.
Cope, E. D. 1872 I, 348.
Cope, E. D. 1880 U, 146 ("stratodontidés").
Jordan, D. S. 1905 A, ii, 137.
1907 B, 360.
1923 A, 128.

STRATODUS Cope. Type *S. apicalis* Cope.

Hay, O. P. 1902 A, 387.
Cockerell, T. D. A. 1919 A, 184.
Dollo, L. 1892 F, 181.
Hennig, E. 1912 A, 490.
Storms, R. 1891 A, 151, 152.
Woodward, A. S. 1901 A, 188.
Zittel and Woodward 1902 A, 98.

Stratodus apicalis Cope.

Hay, O. P. 1902 A, 387.
Hussakof, L. 1908 A, 102.
Woodward, A. S. 1901 A, 189, 614.
Cretaceous (Niobrara); Kansas.

Stratodus oxypogon Cope.

Hay, O. P. 1902 A, 387.
1903 A, 80, text-figs. 66-68.
Hussakof, L. 1908 A, 102.
Woodward, A. S. 1901 A, 189.
Cretaceous (Niobrara); Kansas.

CIMOLICHTHYS Leidy. Type *C. levesiensis* Leidy.

Hay, O. P. 1902 A, 387 (Empo); 390 (Cimolichthys).
Cockerell, T. D. A. 1919 A, 184.
Cope, E. D. 1880 U, 147 (Empo).
Dollo, L. 1892 F, 181 (Empo); 182 (Cimolichthys).
Green, W. R. 1913 A, 73.
Hay, O. P. 1903 A, 81 (Empo).
Henning, E. 1912 A, 490.
Krause, R. G. 1901 A, 120.
Leriche, M. 1902 B, 140.
1906 C, 96.
Moodie, R. L. 1911 G, 278 (Empo).
Stephan, P. 1900 A, 340 (Empo).
Storms, R. 1891 A, 151 (Empo); 153 (Cimolichthys).
Stromer, E. 1917 A, 23.
Woodward, A. S. 1901 A, 221.
1912 A (1902), 43.
Zittel and Koken 1911 A, 126.
Zittel and Schlosser 1923 A, 131.
Zittel and Woodward 1902 A, 98 (Cimolichthys); 99 (Empo).

Cimolichthys contractus (Cope).

Hay, O. P. 1902 A, 387 (Empo).
Woodward, A. S. 1901 A, 228.
Upper Cretaceous (Niobrara); Kansas.

Cimolichthys lisbonensis (Stewart).

Hay, O. P. 1902 A, 38 (Empo).
Woodward, A. S. 1901 A, 228.
Upper Cretaceous (Lisbon shales); Kansas.

Cimolichthys merrillii (Cope).

Hay, O. P. 1902 A, 387 (Empo).
Woodward, A. S. 1901 A, 228.
Upper Cretaceous (Niobrara); Kansas.

Cimolichthys nepaholica (Cope).

Hay, O. P. 1902 A, 387 (Empo).
Cockerell, T. D. A. 1919 A, 184.
Cope, E. D. 1875 E, 230, 279, pls. xlix, fig. 9; pl. 1, fig. 8; lii, fig. 1; liii, figs. 3-5; pl. lix, figs. 1-9; pl. lxi, figs. 2-5 (Empo nepæolica).
Hay, O. P. 1902 B, 745 (Empo).
1903 A, 81, pl. i, fig. 4; text-figs. 69-72 (Empo).
Hussakof, L. 1908 A, 66, fig. 35.
Kruizinga, P. 1924 A, 299, 311 (Empo nepæolica).
Moodie, R. L. 1911 G, 278, pl. lx, pl. lxii, fig. 2 (Empo).
1913 A, 249 (Empo).
Priem, F. 1908 B, 66, 67 (C. nepæolica).
Woodward, A. S. 1901 A, 225, fig. 9.
Upper Cretaceous (Niobrara); Kansas, France.

Cimolichthys semianceps (Cope).

Hay, O. P. 1902 A, 387 (Empo).
1903 A, 84 (Empo).
Woodward, A. S. 1901 A, 228.
Upper Cretaceous (Niobrara); Kansas.

Cimolichthys sp. indet.

Lambe, L. M. 1916 A, 196. Upper Cretaceous (Pierre?); Manitoba.

DERCETIDÆ Cope.

Hay, O. P. 1902 A, 396.
Abel, O. 1921 A, 188 (Hoplopleuridæ).
Boulenger, G. A. 1904 A, 171.
1904 D, 623.
Cockerell, T. D. A. 1919 A, 184, 185.
Dean, Gudger, Henn 1923 A, 643.
Goodrich, E. S. 1909 A, 417.
Hay, O. P. 1903 G, 691.
Hennig, E. 1906 A, 173.
Hoernes, R. 1886 A, 556 (Hoplopleuridæ).
Jordan, D. S. 1905 A, ii, 136, 137.
Jordan, D. S. 1907 B, 359, 377.
1923 A, 128.
Regan, C. T. 1909 B, 83.
1911 B, 120.
Schlosser, M. 1917 A, 140.
Woodward, A. S. 1901 A, 6, 171.
1912 A (1903), 65.
Zittel and Koken 1911 A, 125.
Zittel and Schlosser 1923 A, 135.
Zittel and Woodward 1902 A, 97.

LEPTECODON Williston. Type *L. rectus* Willist.

Hay, O. P. 1902 A, 397.
Sauvage, H. E. 1901 B, 6 (Leptocodon).
1901 F, 77 (Leptocodon).
Schlosser, M. 1901 M, 479.
Woodward, A. S. 1901 A, 233.

Leptecodon rectus Willist.

Hay, O. P. 1902 A, 397.
Sauvage, H. E. 1901 B, 6 (Leptocodon).
1901 F, 77 (Leptocodon).
Schlosser, M. 1901 M, 479.
Woodward, A. S. 1901 A, 233.
Cretaceous (Niobrara); Kansas.

TRIÆNASPIS Cope. Type *T. virgulatus* Cope.

Hay, O. P. 1902 A, 397.
Cockerell, T. D. A. 1919 A, 185.
Hay, O. P. 1903 A, 89.
1903 G, 694.
Hennig, E. 1912 A, 490.
Hussakof, L. 1916 C, 348.
Jordan, D. S. 1919 B, 394.
Woodward, A. S. 1901 A, 187 (Leptotrachelus).

Triænaspis virgulatus Cope.

Hay, O. P. 1902 A, 397.
Cockerell, T. D. A. 1919 A, 185.
Hay, O. P. 1903 A, 89, pl. v, fig. 1.
1903 G, 691.

Jordan, D. S. 1919 B, 394 (Leptotrachelus virgatulus).

Woodward, A. S. 1901 A, 187 (Leptotrachelus).
Upper Cretaceous (Niobrara); South Dakota.

LEPTOTRACHELUS Marck. Type *L. armatus* Marck.

Hay, O. P. 1902 A, 397.
Cope, E. D. 1880 U, 147.
Hay, O. P. 1903 A, 90.
1903 G, 694.
Hennig, E. 1912 A, 490.
Woodward, A. S. 1901 A, 173.
1912 A (1903), 68, pl. xvi, text-figs. 15, 16.
Zittel and Koken 1911 A, 125.
Zittel and Woodward 1902 A, 98.

Leptotrachelus longipinnis Cope.

Hay, O. P. 1902 A, 397.
1903 A, 90, pl. iv, fig. 3; pl. v, fig. 4.

Cockerell, T. D. A. 1919 A, 185.
Hussakof, L. 1908 A, 80.
Woodward, A. S. 1901 A, 187.
Cretaceous (Niobrara); South Dakota.

Leptotrachelus virgulatus (Cope).

Hay, O. P. 1902 A, 397 (Triænaspis).
Hussakof, L. 1908 A, 80.
Cretaceous (Niobrara); South Dakota.

HALOSAURIDÆ Günther.

Günther, A. C. 1868 A, 482.
Arldt, T. 1907 D, 657.
Boulenger, G. A. 1904 D, 623.
Carus, V. 1875 A, 579 (Halisauroidei).
Dean, Gudger, Henn 1923 A, 643.
Gregory, W. K. 1907 D, 483.
Goodrich, E. S. 1909 A, 417.
Günther, A. C. 1880 A, 665.
1881 A, 694.

Jordan, D. S. 1905 A, ii, 138, 158.
1919 B, 283.
1923 A, 128 (To Lyopomi).
Jordan and Evermann 1896 A, 606.
Meek, A. 1916 A, 186.
Rauther, M. 1913 A, 1102.
Regan, C. T. 1909 B, 82.
Woodward, A. S. 1901 A, 162.
Zittel and Schlosser 1923 A, 135.

ECHIDNOCEPHALUS Marck. Type *E. troscheli* Marck.

Marck, W. 1858, Zeitschr. deutsch, geol. Ges., x, 247.
Cockerell, T. D. A. 1919 A, 184.
Woodward, A. S. 1898 C, 259.
1901 A, 163.

Echidnocephalus? americanus Cockerell.

Cockerell, T. D. A. 1919 A, 184, pl. xxxvi, fig. 10.
Upper Cretaceous (Mesa Verde); Wyoming.

Echidnocephalus? pacificus Cockerell.

Cockerell, T. D. A. 1919 A, 185, pl. xxxvi, fig. 11.
Upper Cretaceous (Chico); California.

Order HAPLOMI Cope.

Cope, E. D. 1871 T, 452.
Hay, O. P. 1902 A, 398.
Abel, O. 1919 A, 157.
Arldt, T. 1923 A, 516 ("haplomen").
Boulenger, G. A. 1902 C, 389.
1904 A, 162, 168, 174.
1904 D, 605.
Cope, E. D. 1891 N, 22.
Cunningham, J. T. 1912 A, 247.
Dean, Gudger, Henn 1923 A, 683.
Dietz, P. A. 1917 A, 84.
Fowler, H. W. 1911 A, 166.
Frost, G. A. 1926 A, 464, 479, pl. xx.
Gill, T. 1885 C, 168.
1905 A, 659.
Goodrich, E. S. 1909 A, 397 (Esociformes).
Gregory, W. K. 1907 D, 451, 487.
Hubbs, C. L. 1919 B, 61, 66.

Jaekel, O. 1911 A, 92.
Jordan, D. S. 1885 A, 168.
1904 A, 598.
1905 A, ii, 189, 574.
1907 B, 408, 424, 764.
1923 A, 156.
Jordan and Gilbert 1882 A, 323.
Meek, A. 1916 A, 179.
Rauther, M. 1913 A, 1101.
Regan, C. T. 1909 B, 77, 83.
1911 D, 320 (Haplomi, Microcyprini).
1912 B, 841, 843.
Schlesinger, G. 1909 A, (147, 152).
Starks, E. C. 1901 A, 260.
1904 C, 254.
1916 A, 23.
Swinnerton, H. W. 1905 A, 378.
Whitehouse, R. H. 1910 B, 604.

Suborder CYPRINODONTIFORMES, new form.

Frost, G. A. 1926 A, 475, pl. xxi (Mylocyprini, Pœcilioidea).
Gill, T. 1872 C, 15 (Cyprinodontoidea).
Jordan, D. S. 1923 A, 157 (Cyprinodontes).

Regan, C. T. 1909 B, 82 (Microcyprini).
1911 D, 322 (Pœcilioidea).
Sagemehl, M. 1891 A ("cyprinodonten").
Starks, E. C. 1904 C, 258 (Pœcilioidea).

CYPRINODONTIDÆ Owen.

Owen, R. 1846, 48.
Hay, O. P. 1902 A, 398 (Poeciliidæ).
Adams, A. 1854 A, 107 (Poeciliidæ).
Agassiz, L. 1838 A, 82 ("cyprinodonten").
1844 D, 142 ("cyprinodontes").
Allis, E. P. 1898 B, 95 (Cyprinodontides).
Arldt, T. 1907 D, 649.
1912 A, 690, 762.
1923 A, 518 ("cyprinodontiden").
Bonaparte, C. L. 1840 A, 53 (Pœcilidæ).
Boulenger, G. A. 1904 A, 169.
1904 D, 616, 637.
1917 B, 330.
1919 A, 44.
Bronn, H. G. 1849 A, 780, seq. (Cyprinodontes).
Carus, V. 1875 A, 572 (Cyprinodontes).
Cockerell, T. D. A. 1913 B, 141 (Pœciliidæ).
1915 A, 31 (Pœciliidæ).
Cope, E. D. 1871 T, 455.
Cunningham, J. T. 1912 A, 247.
Dean, Gudger, Henn 1923 A, 676.
Eastman, C. R. 1917 A, 290.
Fitzinger, L. J. 1873 A, 38 (Cyprinodontes).
Frost, G. A. 1926 A, 475.
Gaupp, E. 1898 B, 823 ("cyprinodontiden").
Giebel, C. G. 1855 A, 108 ("cyprinodontes").
Gill, T. 1885 C, 170.
Goodrich, E. S. 1909 A, 400.
Günther, A. C. 1866 A, 299.
Heckel, J. 1850 B, 146 ("poecilien").
Hoernes, R. 1886 A, 530 (Cyprinodontes).
Hubbs, C. L. 1919 B, 66 (Pœciliidæ).
Ihering, H. 1891 C, 25 ("cyprinodonten").
Jordan, D. S. 1885 A, 902.
Jordan, D. S. 1905 A, ii, 194, 586 (Pœciliidæ).
1907 B, 413 (Pœciliidæ).
1923 A, 157, 158.
Jordan and Gilbert 1882 A, 326.
Kindred, J. E. 1924 A, 423 ("cyprinodonts").
Leunis and Ludwig 1883 A, 741.
Lönnberg, E. 1902 A (Cyprinodontes).
Meek, A. 1916 A, 183.
Müller, J. 1845 A, 102, 136 (Cyprinodontes).
Norman, E. W. 1926 A, 441.
Nusbaum, J. 1908 A, 514 ("cyprinodonten").
Owen, R. 1845 B, 144 ("cyprinodonts").
Palacký, J. 1902 B, 150 ("cyprinodonten").
Rauther, M. 1913 A, 1101.
Regan, C. T. 1909 B, 84.
1911 D, 323.
1912 B, 841.
1913 C, 977 ("cyprinodonts").
1923 B, 457 ("cyprinodonts").
Sagemehl, M. 1883 A ("cyprinodonten").
1884 A, 100 ("cyprinodontiden").
Shepherd, C. E. 1914 A, 270.
Stannius, H. 1854 A (Cyprinodontes).
Starks, E. C. 1904 C, 259 (Pœcillidæ).
Stephan, P. 1900 A, 321 ("cyprinodontes").
Struck, W. 1915 A, 137, fig. 3 (Cyprinodon).
Uhlmann, E. 1921 A, 301.
Wagner, H. 1843 A ("cyprinodonten").
Wallace, A. R. 1876 A, ii, 450.
Woodward, A. S. 1901 A, ix, 7, 289.
Zittel and Koken 1911 A, 122.
Zittel and Schlosser 1923 A, 132.
Zittel and Woodward 1902 A, 100.

PARAFUNDULUS Eastman. Type *P. nevadensis* Eastman.

Eastman, C. R. 1917 A, 291.
Jordan, D. S. 1925 B, 43.

Parafundulus erdisi Jordan.

Jordan, D. S. 1924 B, 45, pls. I, J.
1925 B, 43.
Miocene (Lahontan); California.

Parafundulus nevadensis Eastman.

Eastman, C. R. 1917 A, 291, pl. xvi, fig. 2; pl. xvii; pl. xviii, fig. 3.
Jordan, D. S. 1924 B, 47.
Miocene (Lahontan); Nevada.

PROBALLOSTOMUS Cope. Type *P. longulus* Cope.

Hay, O. P. 1902 A, 394.
The systematic position of this genus is doubtful.

Proballostomus longulus Cope.

Hay, O. P. 1902 A, 394.
Woodward, A. S. 1901 A, 296.
Oligocene?; South Dakota.

GEPHYRURA Cope. Type *G. concentrica* Cope.

Hay, O. P. 1902 A, 398 (Gephyura, *errore*).
Arldt, T. 1907 D, 97 ("cyprinodontengattung").
Eastman, C. R. 1917 A, 290.
The systematic position of this genus is doubtful.

Gephyrura concentrica Cope.

Hay, O. P. 1902 A, 398 (Gephyura, *errore*).
Eastman, C. R. 1917 A, 290.
Woodward, A. S. 1901 A, 296.
Oligocene?; South Dakota.

Order SYNENTOGNATHI Gill.

Gill, T. 1856, Proc. Acad. Nat. Sci. Phila., 1856, 148.
Cope, E. D. 1871 T, 456, 457.
1872 C, 338.
Frost, G. A. 1926 A, 471, 480, pl. xx.
Gill, T. 1872 C, 14.
1885 C, 173.
Gregory, W. K. 1907 D, 491.
Hubbs, C. L. 1919 B, 61.
Jordan, D. S. 1905 A, ii, 209.
1907 B, 425.
1921 A, 253.
1923 A, 160.
Jordan and Evermann 1896 A, 707.

Jordan and Gilbert 1882 A, 371.
Regan, C. T. 1909 B, 78.
1911 E, 327, 331.
Regan, C. T. 1912 B, 842, 844.
Starks, E. C. 1904 B, 601 ("synentognaths").

FORFICIDÆ Jordan and Gilbert.

Jordan and Gilbert 1919 A, 36.
Jordan, D. S. 1921 A, 254.
1923 A, 160.

FORFEX Jordan. Type *F. hypuralis* Jordan.

Jordan, D. S. in Jordan and Gilbert 1919 A, 36.
Jordan, D. S. 1920 C, 568.
1921 A, 254.
1923 A, 160.
1925 B, 16.

Forfex hypuralis Jordan and Gilbert.

Jordan, D. S., in Jordan and Gilbert 1919 A, 36, pl. xiv, fig. 3.
1921 A, 254, pl. xxi, fig. *b*.
Miocene (Monterey); California.

BELTION Jordan. Type *B. peronides* Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 257.
1923 A, 161.
1925 B, 16.

Beltion peronides Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 257.
1925 B, 16, pl. v.
Miocene (Monterey); California.

ZELOTICHTHYS Jordan. Type *Zelotes alhambræ* Jordan.

Jordan, D. S. 1925 B, 44.
1921 A, 255 (Zelotes; preoccupied).

Zelotichthys alhambræ (Jordan).

Jordan, D. S. 1921 A, 254, pl. xii, fig. *a*, pl. xxvi, fig. *b*. (Zelotes).

Jordan, D. S. 1925 B, 44.
Miocene (Monterey); California.
In Jordan, D. S. 1921 A, plate xxvi*a* was intended for this species; plate xxvi*b* for *Zelosis hadleyi*.

ROGENIIDÆ Jordan.

Jordan, D. S. 1919 A, 8, 24.
1921 A, 253.
Jordan, D. S. 1923 A, 160.

ROGENIO Jordan. Type *R. solitudinis* Jordan.

Jordan, D. S. 1907 A, 128.
Hubbs, C. L. 1924 A, 177, 178.
Jordan, D. S. 1921 A, 253.

Rogenio solitudinis Jordan.

Jordan, D. S. 1907 A, 128, fig. 23.
1919 A, 5, 8, pl. ii, fig. 1.
1921 A, 253, pl. xvii, fig. *b*.

Jordan and Gilbert 1919 A, 24.
Miocene? (Soledad); California.

Rogenio vanclevei Jordan and Gilbert.

Jordan and Gilbert 1919 A, 24, pl. xxxi, fig. 3.
Jordan, D. S. 1921 A, 253, pl. xxv, fig. *a*.
Miocene (Monterey); California.

XENESTHIDÆ Jordan.

Jordan, D. S. 1923 A, 160.

XENESTHES Jordan. Type *X. velox* Jordan.

Jordan, D. S. 1907 A, 120.
Arldt, T. 1923 A, 500.

Xenesthes velox Jordan.

Jordan, D. S. 1907 A, 120, fig. 16.
Hubbs, C. L. 1924 A, 177.
Triassic; California.

Superfamily SCOMBERESOCOIDÆ, new form.

Frost, G. A. 1926 A, 471, pl. xx (Scombresocoidea).
Klein, E. F. 1884 A, 130, 135, 145, 190, 199, 229 (Scomberesoces).
Klein, E. F. 1885 A (Scomberesoces).
Regan, C. T. 1911 E, 331 (Scomberesocoidea, as suborder).

SCOMBERESOCIDÆ Richardson.

Richardson, J. 1846 A, 264.
The greater number of the authors quoted spell this name Scombresocidæ.
Abel, O. 1906 C, 84.
Arldt, T. 1907 D, 681.
1923 A, 673 ("scombresociden").
Bassoli, G. G. 1906 A, 37 (otoliths).
Boulenger, G. A. 1904 A, 175.
1904 D, 636, 637.
1917 B, 329.
1919 A, 44.
Carus, V. 1875 A, 551 (Scomberesoces).

Cockerell, T. D. A. 1913 B, 145.
Cope, E. D. 1872 C, 338.
Dean, Gudger, Henn 1923 A, 362, 582, 645.
Dietz, P. A. 1917 A, 86.
Dollo, L. 1889 E, 155.
Eastmann, C. R. 1911 C, 360.
Fitzinger, L. J. 1873 A, 36 (Scomberesoces).
Fryd, C. 1901 A, 25.
Gaupp, E. 1898 B, 823 ("scomberesoces").
Gill, T. 1885 C, 174 ("scomberesocines").
Goodrich, E. S. 1909 A, 402.
Gregory, W. K. 1907 D, 493.
Günther, A. C. 1866 A, 233.
1880 A, 620.
1881 A, 693.
Hoernes, R. 1886 A, 531 (Scomberesoces).
Hubbs, C. L. 1919 B, 66.
Ihering, H. 1891 C, 25 ("scomberesociden").
Jordan, D. S. 1904 A, 598.
1905 A, ii, 211 (Exocœtidæ, in part).
1907 B, 427 (Exocœtidæ, in part).
1923 A, 161.
Jordan and Evermann 1896 A, 724.
Jordan and Gilbert 1882 A, 371.
Klein, E. F. 1879 A, 66.
1884 A.
1885 A, 114, 154, 164, 179, 214, 246 (Scomberesoces).
1886 A, 207, 233, 262, 293 (Scomberesoces).
Leunis and Ludwig 1883 A, 742.
Meek, A. 1916 A, 199.
Müller, J. 1846 C, 170, 174 (Scomberesoces).
Norman, E. W. 1926 A, 441.
Nusbaum, J. 1908 A, 514 ("scomberosoces").
Owen, R. 1845 B, 131 (Scomberesox).
1866 A, 10.
Rauther, M. 1913 A, 1102.
Regan, C. T. 1911 E, 333.
Sagemehl, M. 1884 A, 100 ("scomberesociden").
Schlesinger, G. 1909 B.
Siebenrock, F. 1901 A, 108.
Stannius, H. 1854 A, 5, seq. (Scomberesoces).
Terra, P. 1911 A, 214.
Uhlmann, E. 1921 A, 301 (Scomberesoces).
Wallace, A. R. 1876 A, ii, 449.
Woodward, A. S. 1901 A, 356.
Zittel and Koken 1911 A, 122.
Zittel and Schlosser 1923 A, 133.
Zittel and Woodward 1902 A, 103.

SCOMBERESSUS Jordan. Type *Scomberesox acutillus* Jordan and Gilbert.

Jordan, D. S. 1920 C, 571.
1921 A, 257.

Scomberessus acutillus (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 37, pl. xiv, fig. 2. (Scomberesox).
Jordan, D. S. 1920 C, 571.
Jordan, D. S. 1921 A, 257, pl. xxvii, fig. *a*. Miocene (Monterey); California.

Scomberessus edwardsi (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 37, pl. xviii (Scomberesox).
Jordan, D. S. 1921 A, 257. Miocene (Monterey); California.

HEMILAMPRONITES Steinla. Type *H. steinlai* Geinitz.

Steinla, M. 1868, in Geinitz, H. B. 1868 A, 48, pl. iii, figs. 3, 4.
Cockerell, T. D. A. 1919 A, 185.
Jordan, D. S. 1919 B, 350.

Hemilampronites hesperius Cockerell.

Cockerell, T. D. A. 1919 A, 185, pl. xxxvi, fig. 13. Upper Cretaceous (Fox Hills); Colorado.

BELONIDÆ Gill.

Gill, T. 1872 C, 14.
Allis, E. P. 1909 A, 213 (Belone).
Bonaparte, C. L. 1840 A, 301 (Belonini).
Frost, G. A. 1926 A, 471, pl. xx.
Gill, T. 1885 C, 176.
Goodrich, E. S. 1909 A, 403 (Belonineæ).
Gregory, W. K. 1907 D, 492.
Hubbs, C. L. 1919 B, 66.
Jordan, D. S. 1905 A, ii, 210.
1907 B, 426.
Jordan, D. S. 1921 A, 257.
1923 A, 239.
1925 B, 16.
Klein, E. F. 1884 A, 145, 229, 246 (Belone).
1885 A, 114, 154, 177 (Belone).
Regan, C. T. 1911 E, 329, 331.
The genus *Beltion* was at one time referred to this family but was later assigned to the Forficidæ.

Superfamily EXOCŒTOIDÆ, new form.

Frost, G. A. 1926 A, 472, pl. xx (Exocœtoidea).
Regan, C. T. 1911 E, 331 (Exocœtoidea, as suborder).

HEMIRHAMPHIDÆ Jordan and Evermann.

Jordan and Evermann 1896 A, 718 (earliest?).
Arldt, T. 1923 A, 673 (Hemirhamphus).
Bassoli, G. G. 1906 A, 37, pl. i (Hemirhamphus, otoliths).
Cockerell, T. D. A. 1913 B, 145.
Dean, Gudger, Henn 1923 A, 683 (Hemirhamphus).
Frost, G. A. 1926 A, 472 (Hemirhamphus).
Gill, T. 1885 C, 174 (Hemirhamphinæ).
Gregory, W. K. 1907 D, 492 ("half-beaks").

Hubbs, C. L. 1919 B, 66.
Jordan, D. S. 1905 A, ii, 227.
1923 A, 161.
Jordan and Gilbert 1882 A, 372 (Hemirhamphinæ).
Klein, E. F. 1884 A, 130 (Hemirhamphus).
1885 A, 115, 155 (Hemirhamphus).
1886 A, 223 (Hemirhamphus).
Regan, C. T. 1911 E, 324.
Stannius, H. 1854 A (Hemirhamphus).

ZELOSIS Jordan and Gilbert. Type *Clupea hadleyi* Jordan and Gilbert.

Jordan and Gilbert 1920 A, 24.
Jordan, D. S. 1921 A, 256.
The position of this genus is uncertain.

Zelosis hadleyi (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 25, 29, pl. xiii (Clupea).
Jordan, D. S. 1921 A, 256, pl. xxvi, fig. *a*.
1925 B, 44.
Jordan and Gilbert 1920 A, 24, pl. xxix.
Miocene (Monterey); California.
In Jordan, D. S. 1921 A, fig. *a* of pl. xxvi was intended for this species; fig. *b* for *Zelotes alhambræ*.

ROGENITES Jordan. Type *Rogenio bowersi* Jordan.

Jordan, D. S. 1919 A, 8.

Rogenites bowersi Jordan.

Jordan, D. S. 1907 A, 130, fig. 24 (Rogenio).
Jordan, D. S. 1919 A, 5, 8, pl. ii, fig. 2.
1921 A, 255, pl. xx, fig. *a*.
Miocene? (Soledad); California.

RHOMURUS Jordan. Type *R. fulcratus* Jordan.

Jordan, D. S. 1919 A, 9.
The family relationships of this genus are uncertain.

Rhomurus fulcratus Jordan.

Jordan, D. S. 1919 A, 5, 9, pl. iv, figs. 3, 4; pl. v, fig. 1.
1921 A, 248.
1925 B, 44.
Miocene? (Soledad); California.

Order GADOMORPHI, new name.

Unless otherwise indicated the authors, as quoted, use for this order the name Anacanthini. Originally it included the flat fishes, etc.
Abel, O. 1919 A, 157.
Allis, E. P. 1909 A, 11, 197.
Arldt, T. 1907 D, 637.
1923 A, 673, 675 ("anacanthinen").
Boulenger, G. A. 1901 A, 265.
1902 B, 297.
1904 A, 176.
1904 D, 646.
Bridge, T. W. 1896 A, 558.
Carus, V. 1875 A, 551.
Cockerell, T. D. A. 1913 B.
Cope, E. D. 1872 C, 341.
Dietz, P. A. 1921 A, 456 (Gadiformes).
Gill, T. 1884 F, 167.
1885 C, 267.
Frost, G. A. 1926 A, 483, pl. xxii.
Goode and Bean 1895 A, 352.
Goodrich, E. S. 1909 A, 478 (Gadiformes).
Gregory, W. K. 1907 D, 498.
Günther, A. C. 1881 A, 688, 691.
Jordan, D. S. 1905 A, i, 405; ii, 532, 556.
1907 B, 739.
Klein, E. F. 1879 A, 103.
1884 A, 135, 145 (Anacanthini).
1885 A, 119, 141, 208, 238.
1886 A, 220, 256, 287 (Anacanthini).
Müller, J. 1846 C, 130, 177, 202.
Owen, R. 1866 A, 10.
Rauther, M. 1913 A, 1103.
Regan, C. T. 1903 B, 459, 464.
1909 B, 80.
1912 B, 839, 842, 848.
Stannius, H. 1854 A, 5, seq. (Anacanthini).
1891 A ("gadiden").
Steinmann, G. 1927 A, 77 (Gadiformes).
Stephan, P. 1900 A, 321 ("anacanthines").
Terra, P. 1911 A, 213 (Anacanthini).

Superfamily GADOIDÆ Gill.

Gill, T. 1863 B, 243 (As family name).
Dietz, P. A. 1917 A, 84 (Gadiformes).
1921 A, 433.
Gill, T. 1884 F, 170 (Gadoidea).
Günther, A. C. 1881 A, 691 (Gadoidei).
Klein, E. F. 1879 A, 67, 70, 75 (Gadoidei).
Owen, R. 1845 B, 161 ("gadoids").
Zittel and Schlosser 1923 A, 149 (Gadiformes).

GADIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 95, 117.
Abel, O. 1919 A, 47, 108, figs. 21, 24, 67.
Allis, E. P. 1903 B, 172 (Gadus).
1909 A, 213 (Gadus).
1915 A, 566 (Gadus).
Arldt, T. 1907 D, 655.
1921 A, 215 ("gadiden").
Arldt, T. 1922 F, 83.
1923 A, 676 ("gadiden").
Bassoli, G. G. 1906 A, 38, pl. i (otoliths).
Baudelot, E. 1873 A, 101, 205 ("gadoides").
Bonaparte, C. L. 1838 B, 132.
Boulenger, G. A. 1901 A, 265.
1902 B, 296.

Boulenger, G. A. 1904 D, 647, 740.
Bridge, T. W. 1896 A, 558.
Carus, V. 1875 A, 552 (Gadoidei).
Cockerell, T. D. A. 1913 B, 173.
Cope, E. D. 1872 C, 341.
Creaser, C. W. 1926 A, 32.
Cunningham, J. S. 1905 A.
Dean, Gudger, Henn 1923 A, 681.
Dietz, P. A. 1914 A, 139.
1921 A, 433.
Frost, G. A. 1926 A, 483, 489.
Gill, T. 1863 B, 243 (Gadoidæ).
1863 C, 229.
1872 C, 3.
1884 F, 170.
1885 C, 267.
Goode and Bean 1895 A, 352.
Gregory, W. K. 1907 D, 498.
Goodrich, E. S. 1909 A, 482.
Günther, A. C. 1862 A, 326.
1881 A, 691.
Hasse, C. 1872 A (Gadus).
Jordan, D. S. 1905 A, i, 290; ii, 522, 533.
1907 B, 740.
1921 A, 260.
1923 A, 163.
Jordan and Evermann 1898 A, 2531.
Jordan and Gilbert 1882 A, 794.
Klein, E. F. 1879 A, 70, 75, 115.
1884 A, 137, 145, 176, 224, 248.
1885 A, 119, 141, 174, 238.
1886 A, 207, 220, 256, 287 ("gadiden").
Koken, E. 1889 B, 117, 120.
Meek, A. 1916 A, 209.
Mummery, J. H. 1917 A, 256.
Newton, E. T. 1891 A, 93 (Gadus).
Norman, E. W. 1926 A, 407, 411, fig. 44.
Owen, R. 1845 B, 161 ("cod-tribe").
1848 B, 10, 90, figs. 1-5.
1866 A, 10, 93, figs. 75, 77-81 (Gadus).
Priem, F. 1914 B, 249, figs. 10-12 ("gadidarum"; "otolithus").
Rauther, M. 1913 A, 1102.
Regan, C. T. 1903 B, 460, 465.
Reynolds, S. H. 1897 A, 83, figs. 12, 13 (Gadus).
Röse, C. 1897 A, 29, 60, figs. 2-4, 17 (Merlucius, Gadus).
Sagemehl, M. 1883 A, 192 ("gadiden").
1884 A, 74 ("gadiden").
1891 A ("gadoiden").
Schlosser, M. 1917 A, 142, 143 ("gadiden").
Shepherd, C. E. 1910 B, 295 (Gadus).
1916 A, 178, 203.
Siebenrock, F. 1901 A.
Stadmüller, F. 1926 A, 162 (Gadus).
Stannius, H. 1842 C, 97 (Gadus).
1849 A, 539 (Gadus).
1854 A, 5, seq. (Gadoidei).
Starks, E. C. 1905 A, 755 (Gadus).
Stensiö, E. A. 1921 A, 155.
Stephan, P. 1900 A, 301, 340, 364, pl. vi, fig. 1 (Gadus, Lota).
Terra, P. 1911 A, 213.
Thomson, J. S. 1904 A, 1-109, pls. i-viii.
Trouessart, E. L. 1906 A, 212.
Uhlmann, E. 1921 A, 303 ("gadiden").
Weiler, W. 1922 A, 73 (otoliths).
Whitehouse, R. H. 1918 A, 140.
Woodward, A. S. 1901 A, 597.
Zittel and Koken 1911 A, 127.
Zittel and Schlosser 1923 A, 150.

ARNOLDITES Jordan. Type *Arnoldina iniistia* Jordan and Gilbert.

Jordan, D. S. 1923 A, 164.
Hubbs, C. L. 1924 A, 178.
Jordan and Gilbert 1919 A, 63 (Arnoldina, preoccupied).

Arnoldites iniistia (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 63, pl. xxvii, fig. 2 (Arnoldina).
Jordan, D. S. 1921 A, 262 (Arnoldina).
Pliocene; California.

ECLIPES Jordan and Gilbert. Type *E. veternus* Jord. and Gilbert.

Jordan and Gilbert 1919 A, 47 (Eclipes); 56 (Merriamina, type *M. ectenes*).
Jordan, D. S. 1921 A, 260.

Eclipes extensus Jordan.

Jordan, D. S. 1921 A, 261, pl. ix, fig. *c*.
Miocene (Monterey); California.

Eclipes manni Jordan.

Jordan, D. S. 1921 A, 260, pl. xii, fig. *b*; pl. xxxi, fig. *a*.
Jordan, D. S. 1925 B, 17.
Miocene (Monterey); California.

Eclipes veternus Jordan and Gilbert.

Jordan and Gilbert 1919 A, 47, pl. viii, fig. 4 (E. veternus); 56, pl. xxvi, figs. 1-3 (Merriamina ectenes).
Jordan, D. S. 1921 A, 260, pl. xxxi, fig. *b*.
Jordan and Gilbert 1920 A, 41.
Miocene (Monterey); California.

MACROURIDÆ Jordan and Evermann.

Jordan and Evermann 1898 A, 2561.
Boulenger, G. A. 1904 D, 647, 702 (Macruridæ).
Cockerell, T. D. A. 1913 B, 173, pl. xi, fig. 48 (Macruridæ).
Dean, Gudger, Henn 1923 A, 688 (Macruridæ).
Frost, G. A. 1926 A, 483, pl. xxii (Macrurus).
Gill, T. 1885 C, 275 (Macruridæ).
Günther, A. C. 1862 A, 390 (Macruridæ).
Jordan, D. S. 1923 A, 162.
Jordan and Gilbert 1882 A, 810 (Macruridæ).
Shepherd, C. E. 1916 A, 203 (Macrurus).

BOLBOCARA Jordan. Type *B. gyrinus* Jordan.

Jordan, D. S. 1927 B, 94.

Bolbocara gyrinus Jordan.

Jordan, D. S. 1927 B, 94.
Upper Miocene (Lompoc); California.

Order MUGILOMORPHI, new name.

Suborder MUGILIFORMES Günther.

Günther, A. C. 1880 A, 499.
Unless otherwise indicated the authors, as cited, use for this suborder the term Percesoces.
Hay, O. P. 1902 A, 398.
Abel, O. 1919 A, 157.
Arldt, T. 1923 A, 500, 673.
Boulenger, G. A. 1901 D, 348.
1904 A, 162, 174.
1904 D, 636.
1919 A, 44 ("percésoces").
Cockerell, T. D. A. 1910 E, 48.
1913 B, 136.
Cope, E. D. 1871 T, 456.
1891 N, 25.
Cunningham, J. T. 1912 A, 247.
Dean, Gudger, Henn 1923 A, 694.
Derjugin, K. 1909 A.
1910 A, 620.
Dietz, P. A. 1917 A, 86.
Dollo, L. 1909 B (138).
Fowler, H. W. 1911 A, 169.
Gill, T. 1873 F, 10 (>Mugiloidea).
1885 C, 176.
Goodrich, E. S. 1909 A, 419 (Mugiliformes).
Gregory, W. K. 1907 D, 452, 497.
Günther, A. C. 1881 A, 690 (Mugiliformes).
Hubbs, C. L. 1919 B, 66.
Jaekel, O. 1911 A, 94.
Jordan, D. S. 1904 A, 598.
1905 A, ii, 215, 585.
1907 B, 424, 432, 765.
1923 A, 177.
Jordan and Hubbs 1919 A, 6.
Meek, A. 1916 A, 199.
Regan, C. T. 1903 B, 460.
1909 B, 79 (Percesoses, Mugiloidei).
1912 B, 842, 846.
1913 B, 111 (Mugiloidea).
Schlesinger, G. 1909 A (147, 151).
Stannius, H. 1854 A (Mugiloidei).
Starks, E. C. 1916 A, 26.
Whitehouse, R. H. 1910 B, 606.
Woodward, A. S. 1898 B, 120.
1901 A, 347.
Zittel and Schlosser 1923 A, 135 (Mugiliformes).

ATHERINIDÆ Bonaparte.

Bonaparte, C. L. 1838 B, 132.
Arldt, T. 1907 D, 640.
1923 A, 673 ("atheriniden").
Baudelot, E. 1873 A, 101 ("athérines").
Boulenger, G. A. 1904 D, 637, 639.
1917 B, 329.
1919 A, 44.
Cockerell, T. D. A. 1910 E, 47.
1913 B, 146.
Cope, E. D. 1871 T, 457.
1872 C, 328, 338.
Dean, Gudger, Henn 1923 A, 645.
Gill, T. 1885 C, 178.
Goodrich, E. S. 1909 A, 419.
Günther, A. C. 1861 A, 391.
1880 A, 500.
1881 A, 690.
Hubbs, C. L. 1926 A, 64.
Hubbs, C. L. 1905 A, i, 290; ii, 215.
Jordan, D. S. 1907 A, 131.
1921 A, 268.
1923 A, 177.
Jordan and Evermann 1896 A, 788.
Jordan and Gilbert 1882 A, 404.
Jordan and Hubbs 1919 A, 5, 7.
Klein, E. F. 1879 A, 99.
1884 A, 135, 221.
1885 A, 109, 112, 140.
1886 A, 213, 249, 283 (Atherina).
Meek, A. 1916 A, 203.
Owen, R. 1845 B, 120.
Pouchet, G. 1878 A, 54, figs. (Atherina).
Regan, C. T. 1912 B, 847.
Shepherd, C. E. 1916 A, 204.
Siebenrock, F. 1901 A.
Woodward, A. S. 1901 A, 358.

ZANTECLITES Jordan and Gilbert. Type *Z. hubbsi* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 39.
Hubbs, C. L. 1924 A, 178.
Jordan, D. S. 1921 A, 268.
Jordan and Hubbs 1919 A.

Zanteclites hubbsi Jordan and Gilbert.

Jordan and Gilbert 1919 A, 39, pl. xv, fig. 3; pl. xvi.
Jordan, D. S. 1921 A, 268, pl. xxix.
1925 B, 44.
Miocene (Monterey); California.

SPHYRÆNIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 90, 102.
Hay, O. P. 1902 A, 399.
Agassiz, L. 1844 D, 142 ("sphyrænöides").
1845 B, 300 ("sphyrænoides").
Arldt, T. 1907 D, 151, 280.
1923 A, 674 ("sphyræniden").
Bonaparte, C. L. 1833 B, 1197.
1838 B, 133.

Boulenger, G. A. 1904 A, 175.
1904 D, 642.
1917 B, 329.
1919 A, 44.
Bridge, T. W. 1896 A, 569.
Carus, V. 1875 A, 543 (Sphyrænoidei).
Cockerell, T. D. A. 1913 B, 146.
Cunningham, J. T. 1912 A, 246, 247.
Cuvier, G. 1815 A, 110 ("sphyrènes").
Dean, Gudger, Henn 1923 A, 589, 645.
Dietz, P. A. 1917 A, 86.
Fitzinger, L. J. 1873 A, 35 (Sphyrænæ).
Fowler, H. W. 1911 A, 169.
Giebel, C. G. 1855 A, 104 (Spharænoidei).
Goodrich, E. S. 1909 A, 419.
Gudger, E. W. 1918 A, 100.
Hoernes, R. 1886 A, 537.
Jordan, D. S. 1905 A, ii, 222, 593.
Jordan, D. S. 1907 B, 437.
1923 A, 178.
Jordan and Gilbert 1882 A, 410.
Jordan and Hubbs 1919 A, 6.
Klein, E. F. 1879 A, 91.
1884 A, 135.
1885 A, 109, 199.
Leunis and Ludwig 1883 A, 696.
Meckel, J. F. 1825 A (Sphyræna).
Meek, A. 1916 A, 207.
Owen, R. 1866 A.
Regan, C. T. 1912 B, 846.
Schlosser, M. 1917 A, 142 ("sphyraeniden").
Schubert, R. J. 1906 A, 650.
Terra, P. 1911 A, 217.
Wallace, A. R. 1876 A, ii, 429.
Woodward, A. S. 1901 A, 365.
Zittel and Schlosser 1923 A, 136.

SPHYRÆNA Röse. Type *Esox sphyræna* Linn.

Röse, A. F. 1793, Synonymia Nom. Pisc., ed. ii, 112.
Hay, O. P. 1902 A, 400.
Abel, O. 1912 F, 513.
Allis, E. P. 1909 A, 214.
Arldt, T. 1923 A, 674.
Boulenger, G. A. 1904 D, 642.
1919 A, 44.
Bridge, T. W. 1896 A, 569, pl. xxiii.
Bronn, H. G. 1848 B, 1171.
1849 A, 675.
Cockerell, T. D. A. 1913 B, 146.
Dean, Gudger, Henn 1923 A, 395, 574, 645.
Gervais, P. 1859 A, 514, pl. lxviii.
Giebel, C. G. 1855 A, 104, pl. xliii, fig. 9.
Gudger, E. W. 1918 A, 55, 101, pls. i-vii.
Jordan, D. S. 1905 A, ii, 223, 593.
1907 B, 438.
1917 A. 43, 52, 58.
Jordan and Evermann 1917 A, 43, 52, 58.
Jordan and Gilbert 1882 A, 410.
Klein, E. F. 1879 A, 91.
1884 A, 139, 181, 184, 199, 212, pl. ii.
1885 A, 111, 135, 168, 228.
Klein, E. F. 1886 A, 210, 242, 279, figs. 19, 39.
Leunis and Ludwig 1883 A, 696.
Owen, R. 1845 B, 126, pl. liii.
1848 B, 46.
1866 A.
1868 A, 909.
Priem, F. 1914 B, 255, fig. 22 ("otolithus").
Ridewood, W. G. 1896 A, 384, 386.
1904 A, 59.
Schlesinger, G. 1909 A (144).
Starks, E. C. 1899 B, 114.
Stephan, P. 1898 A, 359.
1900 A, 314, 409.
Woodward, A. S. 1901 A, 366.

Sphyræna major Leidy.

Hay, O. P. 1902 A, 400.
Woodward, A. S. 1901 A, 368.
Pleistocene; South Carolina.

Sphyræna sp. indet.

Gidley, J. W. 1926 F, 192, pl. lxxi (Saurodon. Genus doubtful). Upper Cretaceous (Ripley): Tennessee.

Order SELENICHTHYES Boulenger.

Boulenger, G. A. 1904 A, 173.
Boulenger, G. A. 1904 D, 627.
Goodrich, E. S. 1909 A, 475.
Frost, G. A. 1927 A, 439 (Allotriognathi).
Jordan, D. S. 1905 A, ii, 243.
1907 B, 458.
1921 A, 265.
1923 A, 166.
Regan, C. T. 1909 B, 80 (Lamproidei).

Suborder LAMPRIDIFORMES Goodrich.

Goodrich, E. S. 1909 A, 475.

LAMPRIDIDÆ Gill.

Gill, T. 1872 C, 9.
Boulenger, G. A. 1904 D, 627, 628.
Dean, Gudger, Henn 1923 A, 590, 644.
Frost, G. A. 1927 A, 439 (Lampridæ).
Jordan, D. S. 1905 A, ii, 10, 243.
Jordan, D. S. 1907 B, 459.
1921 A, 265 (Lampridæ).
1923 A, 166 (Lampridæ).
Jordan and Evermann 1896 A, 953.
Jordan and Gilbert 1882 A, 453.

DIATOMŒCA Jordan and Gilbert. Type *D. zatima* Jord. and Gilbert.

Jordan and Gilbert 1919 A, 58.
Jordan, D. S. 1920 C, 569.
Jordan, D. S. 1921 A, 264.
Jordan and Gilbert 1920 A. 50

Diatomœca zatima Jordan and Gilbert.

Jordan and Gilbert 1919 A, 58, pl. xxiv, fig. 3.
Jordan, D. S. 1920 B, 472, fig. 3 (Lampris).
Jordan, D. S. 1921 A, 265, pl. 4, fig. *b*; pl. xxxii.
1927 B, 90.
Jordan and Gilbert 1920 A, 40, pl. xix.
Miocene (Monterey); California.

LAMPRIS Retzius. Type *Zeus guttatus* Brünnich.

Retzius, A. J. 1799, Nya Handlung, iii, 91.
Boulenger, G. A. 1904 D, 629.
Dean, Gudger, Henn 1923 A, 589, 644.
Frost, G. A. 1927 A, 439, pl. viii.
Goodrich, E. S. 1909 A, 475.
Günther, A. C. 1860 A, 415, 416.
Hubbs, C. L. 1924 A, 178.
Jordan, D. S. 1905 A, ii, 244, fig. 194.
1907 B, 132, 458, figs. 84, 363.
Jordan, D. S. 1920 B, 470.
1921 A, 266.
1923 A, 173.
Jordan and Evermann 1896 A, 954.
1917 A, 54.
Because of the close relationship of *Lampris* to *Diatomœca* citations to the literature of the former are given.

Order THORACOSTEI Swinnerton.

Swinnerton, H. H. 1902 A, 585 (March).
Hay, O. P. 1902 A, 396 (Phthinobranchii. June 9).
Boulenger, G. A. 1902 A, 151 (Catosteomi. August).
1904 D, 626 (Catosteomi).
Dietz, P. A. 1917 A, 87 (Cateostomi).
Eastman, C. R. 1911 C, 360.
Goodrich, E. S. 1909 A, 410 (Gasterosteiformes).
Gregory, W. K. 1907 D, 452, 493 (Thoracostraci).
Jordan, D. S. 1903 A, 136 (Phthinobranchii).
1905 A, ii, 227-240 (Phthinobranchii).
1907 B, 442 (Phthinobranchii).
Rauther, M. 1913 A, 1102 (Catosteomi).
Regan, C. T. 1909 B, 78, 84.
1912 B, 845.
Whitehouse, R. H. 1910 B, 605 (Catosteomi).
Zittel and Schlosser 1923 A, 133 (Gasterosteiformes).

Suborder GASTEROSTEIFORMES Gill.

Gill, T. 1872 C, 13.
Unless otherwise indicated the writers, as cited, use for this group the name *Hemibranchii*.
Hay, O. P. 1902 A, 396.
Allis, E. P. 1909 A, 195.
Boulenger, G. A. 1902 A, 149.
Cope, E. D. 1871 T, 456.
1891 N, 25.
Dean, Gudger, Henn 1923 A, 550, 589, 644.
Gill, T. 1884 E, 154.
1885 C, 280.
Goodrich, E. S. 1909 A, 410-412 (Gasterosteiformes).
Gregory, W. K. 1907 D, 452.
Günther, A. C. 1880 A, 504 (Gasterosteiformes).
Hubbs, C. L. 1919 B, 61.
Jordan, D. S. 1904 A, 598.
1907 B, 442, 765.
1923 A, 173.
Jordan and Gilbert 1882 A, 387.
Meek, A. 1916 A, 187.
Regan, C. T. 1912 B, 845 (Gastrosteoidei).
1913 A, 172, 182 (Gastrosteoidea).
Starks, E. C. 1902 A, 619, 623.
1904 B, 601 ("hemibranchs").
Whitehouse, R. H. 1905 B, 605.
Woodward, A. S. 1901 A, xi, 369.

GASTEROSTEOIDÆ, new form.

Gill, T. 1872 C, 13 (Gasterosteoidea).
1884 E, 154 (Gasterosteoidea).
Starks, E. C. 1902 A, 623 (Gasterosteoidea).

GASTEROSTEIDÆ Bonaparte.

Bonaparte, C. L. 1838 B, 133.
Hay, O. P. 1902 A, 397.
Abel, O. 1912 F, 565 (Gastrosteidæ).
Arldt, T. 1912 A, 760.
1923 A, 520 ("gasterosteiden").
Bonaparte, C. L. 1840 A, 56.
Boulenger, G. A. 1902 A, 149, 151 (Gastrosteidæ).
1904 A, 173 (Gastrosteidæ).
1904 D, 629 (Gastrosteidæ).
1917 B, 330.
Carus, V. 1875 A, 543 (Gasterosteidei).
Cope, E. D. 1871 T, 457.
Cunningham, J. T. 1912 A, 247.
Dean, Gudger, Henn 1923 A, 644.
Dietz, P. A. 1917 A, 87.
Eigenmann, C. H. 1887 A, 233.
Fitzinger, L. J. 1873 A, 34.
Fryd, C. 1901 A, 24 (Gastrosteidæ).
Gill, T. 1875 B, 252.
1884 E, 155, 157.
1885 C, 280.
Goetsch, W. 1920 A, 473 ("gasterosteiden").
Goodrich, E. S. 1909 A, 412.
Günther, A. C. 1881 A, 691.
Heilprin, A. 1887 A, 68.
Hoernes, R. 1886 A, 537.
Jordan, D. S. 1905 A, ii, 228, 571.
1907 B, 443.
1923 A, 173.
Jordan and Gilbert 1882 A, 392.
Kiaer, J. 1924 A, 104.
Klein, E. F. 1886 A, 274 (Gasterostei).
Leunis and Ludwig 1883 A, 698 (Gastrosteidæ).
Meek, A. 1916 A, 187.
Owen, R. 1866 A, 193 (Gasterostei).
Rauther, M. 1913 A, 1102.

Regan, C. T. 1909 B, 84 (Gastrosteidæ).
1913 A, 169, 172 (Gastrosteidæ).
Siebenrock, F. 1901 A, 107.
Starks, E. C. 1902 A, 619, 624, 626.
Trouessart, E. L. 1906 A, 212.
Wallace, A. R. 1876 A, ii, 424.
Whitehouse, R. H. 1910 B, 606.
Woodward, A. S. 1901 A, xi, 370.

GASTEROSTEUS Linn. Type *G. aculeatus* Linn.

Linnæus, C. 1758 A, 295.
Hay, O. P. 1902 A, 397.
Abel, O. 1912 F, 104, 571, 569.
1922 F, 80.
Allis, E. P. 1909 A, 213.
1915 A, 566.
1918 A, 243.
Agassiz, A. 1877 A, 121, pl. ii, fig. 13.
Arldt, T. 1923 A, 521.
Bardeleben, K. 1901 A, 28.
Baudelot, E. 1873 A, 94.
Bertin, L. 1921 A, 143.
1921 B, 623.
Born, G. 1827 A, 187.
Boulenger, G. A. 1893 C, 228.
1902 A, 149.
1904 D, 630.
Brandt, J. F. 1865 A, 26.
Carlsson, A. 1894 A, 228.
Cuvier, G. 1805 A.
Dean, Gudger, Henn 1923 A, 681.
Derjugin, K. M. 1909 A.
1910 A, 616.
Edgeworth, F. H. 1926 A, 187.
Eigenmann, C. H. 1887 A, 233.
Fryd, C. 1901 A, 24.
Ganin, M. 1880 A, 143.
Gaupp, E. 1911 A, 414.
Geoffroy St. Hilaire, G. 1807 B, 414.
Gill, T. 1884 E, 158.
1885 C, 281, fig. 156.
Goetsch, W. 1915 A, 460.
1920 A, 13, 462, 473, pl. xx.
Goodrich, E. S. 1909 A, 510, figs.
Hague, F. 1924 A, 276.
Hase, A. 1907 A.
Hay, O. P. 1907 C, 271.
Heilprin, A. 1887 A, 68, 288.
Hubbs, C. L. 1926 A, 63.
Huxley, T. H. 1859 D, 407, figs. 7, 8.
1859 H, 33, pl. iii, figs. 1-4.
1863 F, 191, fig. 25.
Jordan, D. S. 1905 A, ii, 231, 571.
1907 A, 131 (Merriamella, type *M. doryssa* Jordan).
1907 B, 446.
1910 C, 635.
Jordan and Evermann 1896 A, 746.
1917 A, 13.
Jordan and Gilbert 1882 A, 393.
Jungerson, H. F. E. 1910 A, 353.
Kiaer, J. 1924 A, 104.
Kindred, J. E. 1921 A, 427.
1924 A, 422.
Klein, E. F. 1884 A, 135, 145, 181, 203, 234, 246.
1885 A, 118, 133, 235.
1886 A, 217, 253, 274.
Kner, R. 1862 A, 61.
Leunis and Ludwig 1883 A, 698 (Gastrosteus).
Mayer, A. F. 1862 A, 110.
Mayhoff, H. 1914 A, 403.
Meckel, J. F. 1825 A.
Noorden, C. 1883 A, 235.
Norman, E. W. 1926 A, 401, fig. 53.
Owen, R. 1845 B, 91.
1868 A, 881.
Pehrson, T. 1922 A.
Pouchet, G. 1878 A, 35, 145.
Prince, E. E. 1885 A, 487, pl. xiv.
Regan, C. T. 1909 C, 435.
1910 B, 533.
Ridewood, W. G. 1904 A, 63 (Gastrosteus).
Roth, F. 1920 A, 513.
Ryder, J. 1885 E, 94.
1885 F, 415.
1886 A, 75.
Schauinsland, H. 1906 A.
Schmalhausen, J. J. 1913 A, 12.
Schmid-Monnard, C. 1883 A, 127, pl. ix.
Solger, B. 1880 A, 378, 388.
Starks, E. C. 1902 A, 622, 626, fig. 1.
1916 A, 24.
Swinnerton, H. H. 1902 A, 503, pls. xxviii-xxxi.
1905 A, 319.
1905 B, 369, pl. xxiii.
1911 A, 452 ("sticklebacks").
Thilo, O. 1879 A, 5, pl. i.
1896 A, 306, pl. viii.
1896 B, 100.
1898 B, 86.
Uhlmann, E. 1921 A, 305.
Ussow, S. 1900 A, pls. i-iv.
Wagner, R. 1843 A.
Whitehouse, R. H. 1910 B, 605.
Wilder, B. 1876 A, 166.

Gasterosteus aculeatus bispinosus Walbaum.

Walbaum, J. J. 1792, Artedi Pisc., 450 (G. bispinosus).
Hay, O. P. 1902 A, 397 (G. bispinosus).
Ami, H. M. 1901 C, 54 ("G. sp. indet." This species?).
Bertin, L. 1921 B, 623 (G. aculeatus).
Dawson, J. W. 1872 B, 403 (Gasterosteus).
1872 C, 57, 99 (Gasterosteus).
1894 C, 203, 267, pl. viii, fig. 2 (G. aculeatus?).
Coleman, A. P. 1901 C, 224 (G. aculeatus).
Hay, O. P. 1923 A, 287 (G. aculeatus).
Jordan and Evermann 1896 A, 748 (G. bispinosus).
Lambe, L. M. 1904 C, 39, 44 (G. bispinosus).
Regan, C. T. 1909 C, 435 (G. aculeatus).
Roth, F. 1920 A, 513 (G. aculeatus).
Recent; Labrador to New Jersey: Pleistocene (Leda clay); Ontario.

Gasterosteus doryssus Jordan.

Jordan, D. S. 1907 A, 131, figs. 25, 26 (Merriamella).
Eastman, C. R. 1917 A, 291 (G. doryssus).

Hay, O. P. 1907 C, 271, text-figs. 1-3 (G. williamsoni leptosomus).
Hubbs, C. L. 1924 A, 177 ("Gasterosteus").
Jordan, D. S. 1908 A, 117.
1908 B, 811.
Jordan and Beal 1913 A, 256.
Miocene (Lahontan); Nevada.

Order LOPHOBRANCHIA Latreille.

Latreille, P. A. 1825 A, 116.
This name is usually spelled *Lophobranchii*.
Allis, E. P. 1909 A, 195.
Arldt, T. 1907 D, 663.
Bonaparte, C. L. 1831 A, 97, 119.
Boulenger, G. A. 1904 A, 174.
1904 D, 629.
Bridge, T. W. 1896 A, 578.
Bronn, H. G. 1848 A, 688.
Carus, V. 1875 A, 585.
Cope, E. D. 1871 T, 457.
1872 C, 335, 339.
1891 N, 25, 26.
Dean, Gudger, Henn 1923 A, 687.
Fitzinger, L. J. 1873 A, 48.
Gill, T. 1872 C, xxxix, 2.
1885 C, 285.
1896 D, 153 ("lophobranchs").
Goetsch, W. 1920 A, 11, 453 ("lophobranchier").
Goodrich, E. S. 1909 A, 414.
Gregory, W. K. 1907 D, 493.
Günther, A. C. 1870 A, 150.
1880 A, 678.
1881 A, 688, 694.
Hollard, H. 1850 A, 565 ("lophobranches").
Huot, A. 1902 A.
Jordan, D. S. 1904 A, 598.
1905 A, ii, 235.
1907 B, 450.
1923 A, 174.
Jordan and Gilbert 1882 A, 381.
Jungerson, H. F. E. 1910 A, 269.
1910 B, 503.
Kaup, F. 1853 A, 226.
Kerr, R. 1860 B, 821.
Klein, E. F. 1879 A, 69 ("lophobranchen").
Meek, A. 1916 A, 195.
Müller, J. 1845 A, 102, 130.
1846 C, 122, 131.
Owen, R. 1866 A, 12, 114, 368.
Parker, W. K. 1868 A, 32.
Pouchet, G. 1878 A, 49 ("lophobranches").
Regan, C. T. 1909 B, 78, 84.
1912 B, 845.
Ryder, J. 1882 A, 191 ("lophobranchiates").
Schlosser, M. 1917 A, 142 ("lophobranchier").
Stannius, H. 1854 A, 7, seq.
Stephan, P. 1900 A, 295, 321 ("lophobranches").
Zittel and Koken 1911 A, 141.
Zittel and Schlosser 1923 A, 134.

SYNGNATHOIDÆ, new form.

Gill, T. 1885 C, 285 (Syngnathi).
Regan, C. T. 1912 A, 845 (Syngnathoidei).

SYNGNATHIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 97, 119.
Arldt, T. 1907 D, 684.
1923 A, 521 ("syngnathiden").
Bonaparte, C. L. 1838 B, 130.
Boulenger, G. A. 1904 A, 174.
1904 D, 757.
1917 B, 330.
Bridge, T. W. 1896 A, 578.
Carus, V. 1875 A, 585 (Syngnathoidei).
Cope, E. D. 1871 T, 457.
1872 C, 339.
Dean, Gudger, Henn 1923 A, 703.
Fries, B. F. 1838 A, 238 (Syngnathi).
Gill, T. 1885 C, 285.
1896 D, 153, 157.
Goetsch, W. 1915 A, 438 ("syngnathiden").
Goodrich, E. S. 1909 A, 415.
Gregory, W. K. 1907 D, 493.
Günther, A. C. 1870 A, 153.
1880 A, 679.
1881 A, 694.
Hollard, H. 1850 A, 565 ("syngnathes").
Huot, A. 1902 A ("syngnathiniens").
Jordan, D. S. 1923 A, 174.
Jordan and Evermann 1898 A, 760.
Jordan and Gilbert 1882 A, 382.
Jungerson, H. F. E. 1910 A, 292, 346.
Kaup, F. 1853 A, 228.
Klein, E. F. 1884 A, 135, 150, 199, 201, 234, 244.
1885 A, 108, 109, 128, 157, 164, 197, 199, 217, 251.
1886 A, 205, 229, 268, 273, 285, 295.
Meek, A. 1916 A, 195.
Mivart, St. G. 1879 B, 540 ("sea-horses").
Norman, E. W. 1926 A.
Owen, R. 1866 A.
Rauther, M. 1913 A, 1016 ("syngnathiden").
Ryder, J. 1882 A, 191 ("sea-horses").
Schmalhausen, J. J. 1916 C, 212.
Siebenrock, F. A. 1901 A, 106.
Stannius, H. 1854 A (Syngnathi).
Woodward, A. S. 1901 A, 380.
Zittel and Koken 1911 A, 141 ("syngnathiden").
Zittel and Schlosser 1923 A, 134.

SYNGNATHUS Linn. Type *S. acus* Linn.

Linnæus, C. 1758 A, 336.
Allis, E. P. 1909 A, 195, 198.
Arldt, T. 1923 A, 521.
Baudelot, E. 1873 A, 94.
Buist, T. P. 1912 A, 613, pl. xiii.
Dean, Gudger, Henn 1923 A, 703.
Fries, B. F. 1838 A, 236.
1838 B, 251.
Goetsch, W. 1915 A, 441, pl. xviii; text-figs. 1.
1920 A, 11, 38, 454, pl. xx.
Goodrich, E. S. 1909 A, 414.
Günther, A. C. 1870 A, 153.

Huot, A. 1902 A, pls. xxi, xxvi.
Jordan, D. S. 1917 A, 16.
Jordan and Evermann 1898 A, 761 (Siphostoma).
1917 A, 16.
Jordan and C. Gilbert 1882 A, 383 (Siphostoma).
Jordan and J. Z. Gilbert 1919 A, 34.
Jungerson, H. F. E. 1910 A, 304, 353.
1910 B, 569.
Kasaneff, W. 1906 A, 854, figs. 1-6.
Kindred, J. E. 1921 A, 425, figs. 1-14.
1924 A, 421, pls. i-iii.
Kingsley, J. S. 1925 A, 92, fig. 97.
Klein, E. E. 1885 A, 108, 157, 197, 217, 252.
McMurrich, J. P. 1883 A, 623, pls. xlii, xliii.
Meek, A. 1916 A, 196.
Owen, R. 1866 A, 195.
Parker, W. K. 1868 A, 32.
Pouchet, G. 1878 A, 34, 40, 76, 144, figs. ("syngnathe").
Rauther, M. 1913 A, 1061, fig. 5.
Ryder, J. 1882 A, 194.
Siebenrock, F. 1901 A, 118.
Stannius, H. 1854 A, 75.
Swinnerton, H. H. 1902 A, 575.
Vogel, R. 1909 A, 534.
Woodward, A. S. 1901 A, 382.

Syngnathus avus Jordan and Gilbert.

Jordan and Gilbert 1919 A, 34, pl. xxviii, fig. 8.
Duncker, G. 1923 A, 239.
Jordan, D. S. 1921 A, 259.
1926 B, 223.
1927 A, 191.
Miocene (Monterey); California.

Order PERCOPSOMORPHI, new name.

Unless otherwise indicated the authors, as quoted, use for this family the name Salmopercæ. This is the plural of the genus name *Salmoperca*.

Boulenger, G. A. 1904 D, 620 (Part of Haplomi).
Frost, G. A. 1926 A, 470, pl. xx.
Goodrich, E. S. 1909 A, 425.
Jordan, D. S. 1923 A, 164 (Salmopercæ); 165 (Xenarchi).
Jordan and Evermann 1896 A, 782.
Regan, C. T. 1909 B, 79, 84.
1911 C, 294.
1912 B, 842, 846.
Jordan, D. S. 1905 A, 241.
1907 B, 456, 765.

ERISMATOPTERIDÆ.

Jordan, D. S. 1905 A, ii, 242, 296.
Jordan, D. S. 1907 B, 457.

ERISMATOPTERUS Cope. Type *E. rickseckeri* Cope.

Hay, O. P. 1902 A, 404.
Boulenger, G. A. 1902 E, 200.
Eastman, C. R. 1917 A, 294.
Jordan, D. S. 1903 A, 137.
1905 A, ii, 242.
1907 B, 457.

Erismatopterus endlichii Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 176.
Jordan, D. S. 1907 B, 457, fig. 362.
Merrill, G. P. 1907 A, 11.
Woodward, A. S. 1901 A, 416.
Eocene (Green River); Wyoming.

Erismatopterus levatus Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 176.
Hussakof, L. 1908 A, 74.
Jordan, D. S. 1905 A, ii, 242.
1907 B, 457.
Woodward, A. S. 1901 A, 416.
Eocene (Green River); Wyoming.

Erismatopterus rickseckeri Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 176.
Hussakof, L. 1908 A, 74.
Woodward, A. S. 1901 A, 416.
Eocene (Green River); Wyoming.

AMPHIPLAGA Cope. Type *A. brachyptera* Cope.

Hay, O. P. 1902 A, 403.
Boulenger, G. A. 1902 E, 200.
Eastman, C. R. 1917 A, 294.
Jordan, D. S. 1903 A, 137.
1905 A, ii, 243.
1907 B, 458.
Zittel and Koken 1911 A, 132.

Amphiplaga brachyptera Cope.

Hay, O. P. 1902 A, 403.
Cockerell, T. D. A. 1908 C, 176.
Merrill, G. P. 1907 A, 6.
Woodward, A. S. 1901 A, 416.
Eocene (Green River); Wyoming.

ASINEOPIDÆ Cope.

Cope, E. D. 1870 H, 380.
Hay, O. P. 1902 A, 403 (Aphrododeridæ, part).
Cockerell, T. D. A. 1914 A, 191.
Jordan, D. S. 1905 A, 243, 296, 317.
Jordan, D. S. 1907 B, 458, 532.
1923 A, 165.
Woodward, A. S. 1901 A, 416.
Zittel and Koken 1911 A, 132.

ASINEOPS Cope Type *A. squamifrons* Cope.

Hay, O. P. 1902 A, 404.
Boulenger, G. A. 1902 E, 200.
1904 D, 656.
Cockerell, T. D. A. 1914 A, 191.
Eastman, C. R. 1917 A, 294.
Haseman, J. D. 1912 A, 98.

Jordan, D. S. 1903 A, 137.
Zittel and Koken 1911 A, 132.

Asineops pauciradiatus Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 176.
1914 A, 191.
Merrill, G. P. 1907 A, 6.
Woodward, A. S. 1901 A, 417.
Eocene (Green River); Wyoming.

Asineops squamifrons Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 176.
1914 A, 191.
Hussakof, L. 1908 A, 63.
Jordan, D. S. 1905 A, 243, 217.
1907 B, 532.
Merrill, G. P. 1907 A, 7.
Woodward, A. S. 1901 A, 417.
Eocene (Green River); Wyoming.

APHREDODERIDÆ Günther.

Günther, A. C. 1859 A, 271.
Hay, O. P. 1902 A, 403.
Arldt, T. 1907 D, 280, 284.
1923 A, 678 (Aphredoderus).
Bonaparte, C. L. 1846, Cat. Met. Pesci Europei, 7 (Aphredodeiridæ).
Boulenger, G. A. 1902 E, 199.
Cockerell, T. D. A. 1906 A, 163.
1913 B, 152.
1916 A, 899 (Aphredoderus).
Dean, Gudger, Henn 1923 A, 375, 499, 647 (Aphredoderus).
Gill, T. 1875 B, 252.
Goodrich, E. S. 1909 A, 427.
Jordan, D. S. 1905 A, ii, 294, 557.
1907 B, 509.
1919 B, 178.
1923 A, 165.
Jordan and Gilbert 1882 A, 460.
Regan, C. T. 1911 C, 296.
1911 D, 320.
Schlosser, M. 1917 A, 144 ("aphredoderiden").
Starks, E. C. 1904 B, 603.
Wallace, A. R. 1876 A, ii, 425.
Woodward, A. S. 1901 A, 416.
Zittel and Koken 1911 A, 132 (Aphreidoderidæ).
Zittel and Schlosser 1923 A, 138.

TRICHOPHANINÆ Cockerell.

Cockerell, T. D. A. 1913 B, 152.
Cockerell, T. D. A. 1908 A, 573 (Trichophanidæ).

TRICHOPHANES Cope. Type *T. hians* Cope.

Hay, O. P. 1902 A, 404.
Boulenger, G. A. 1902 E, 200.
Cockerell, T. D. A. 1906 A, 163.
1908 A, 570.
Eastman, C. R. 1917 A, 294.
Jordan, D. S. 1903 A, 137.
Schlosser, M. 1917 A, 144.

Tricophanes copei Osborn, Scott, and Speir.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1906 A, 163.
1908 A, 571.
1908 C, 176.
Woodward, A. S. 1901 A, 416.
Miocene (Florissant); Colorado.

Trichophanes foliarum Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1906 A, 163.
1908 A, 571, figs. 1, 2.
1908 C, 176.
1913 B, 252.
Eastman, C. R. 1917 A, 294.
Jordan, D. S. 1910 B, 186.
Merrill, G. P. 1907 A, 20.
Woodward, A. S. 1901 A, 416.
Miocene (Florissant); Colorado.

Trichophanes hians Cope.

Hay, O. P. 1902 A, 404.
Merrill, G. P. 1907 A, 20.
Tertiary ("coal shales"); Nevada.

Order HETEROSOMATA Bonaparte.

Bonaparte, C. L. 1846, Cat. Met. Pesci Europ., 47.
Boulenger, G. A. 1902 B, 302 (Zeorhombi, part).
Cockerell, T. D. A. 1913 B, 171.
Cope, E. D. 1871 T, 456.
1872 C, 340.
1891 N, 25, 26.
Dean, Gudger, Henn 1923 A, 653.
Gill, T. 1861 A, 7.
1872 C, 2.
1885 C, 275.
Goode and Bean 1895 A, 426.
Gregory, W. K. 1907 D, 453.
Günther, A. C. 1880 A, 553 (Pleuronectoidei).
1881 A, 692 (Pleuronectoidei).
Jordan, D. S. 1905 A, ii, 247, 481.
1907 B.
1923 A, 166.
Jordan and Evermann 1896 A.
Jordan and Gilbert 1882 A, 813.
Klein, E. F. 1879 A, 103 (Pleuronectoidei).
Kner, R. 1861 A, 235 (Pleuronectides).
Mayhoff, H. 1914 A, 389.
Meek, A. 1916 A, 356.
Müller, J. 1846 C (Anacanthini, in part).
Regan, C. T. 1909 B, 80.
1910 C, 484, 491.
1912 B, 842, 850.
1913 B, 111.

HIPPOGLOSSIDÆ Jordan.

Jordan, D. S. 1923 A, 168.
1905 A, ii, 489 (Hippoglossinæ).
1925 B, 17.
Jordan and Evermann 1898 A, 2605 (Hippoglossinæ).
Kyle, H. M. 1921 A, 75 ("flat-fishes").

ISOMMA Jordan. Type *I. pristinum* Jordan.

Jordan, D. S. 1927 B, 94.

Isomma pristinum Jordan.

Jordan, D. S. 1927 B, 95.
Upper Miocene (Monterey); California.

HIPPOGLOSSUS Cuvier. Type *H. hippoglossus* (Linnæus).

Cuvier, G. 1817, Règne Anim., ed. 1, ii, 221.
Gill, T. 1885 C, 276.
Günther, A. C. 1862 A, 402.
Jordan, D. S. 1925 B, 17.
Jordan and Evermann 1898 A, 2611.
Jordan and Gilbert 1882 A, 818.
Kyle, H. M. 1921 A, 77, 89, pl. vi, figs. 35, 36.

Hippoglossus antiquus Jordan.

Jordan, D. S. 1924 B, 43, pl. G.
1925 B, 18.
Miocene (Monterey); California.

VORATOR Jordan. Type *Hippoglossus antiquus* (in part) Jordan.

Jordan, D. S. 1925 B, 17.

Vorator antiquus (Jordan).

Jordan, D. S. 1924 B, pl. G (Hippoglossus antiquus, in part).
1925 B, 18, pls. viii, ix.
Miocene (Monterey); California.

PLEURONECTIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 96, 117.
Abel, O. 1921 A, 159 ("pleuronektiden").
Allis, E. P. 1909 A, 195, 214.
Arldt, T. 1923 A, 692 ("pleuronectiden").
Bassoli, G. G. 1906 A, 46, pl. ii (otoliths).
Berrill, N. J. 1925 A, 217, figs. 1-15 (Pleuronectes, Solea).
Bonaparte, C. L. 1838 B, 131.
Boulenger, G. A. 1902 B, 295, 303.
1904 A, 183.
1904 D, 751.
1917 B, 329.
Bridge, T. W. 1896 A, 559.
Carus, V. 1875 A, 554 (Pleuronectoidei).
Cockerell, T. D. A. 1913 B.
Cope, E. D. 1871 T, 458.
1872 C, 340.
Creaser, C. W. 1926 A, 53.
Cunningham, J. T. 1905 A, 125, pls. vii-ix.
Cuvier, G. 1805 A ("pleuronectes").
Dahl, K. 1909 A, 760.
Dean, Gudger, Henn 1923 A, 696.
Dietz, P. A. 1917 A, 86.
1921 A, 433.
Fitzinger, L. J. 1873 A, 42 (Pleuronectæ).
Fulton, T. W. 1906 A, 50, 69, pls. i B, iii A.
Gill, T. 1865 D, 215 (Pleuronectoidæ).
1872 C, 2.
1885 C, 276.
1889 B, 593, 606.
Goette, A. 1901 A, 533 ("pleuronectiden").
Goode and Bean 1895 A, 426.
Goodrich, E. S. 1909 A, 469.
Gregory, W. K. 1907 D, 499.
Günther, A. C. 1862 A, 399.
1880 A, 553.
1881 A, 692.
Hasse, C. 1872 A ("pleuronecten").
Hasse and Schwarck 1870 A, 46 ("pleuronectiden").
Jordan, D. S. 1911 A, 432.
1923 A, 169.
Jordan and Evermann 1898 A, 2602.
Jordan and Gilbert 1882 A, 813.
Kingsley, J. S. 1925 A, 71, 93, 107, 108, 224, 225, 237, figs. 74, 98, 114, 235 (Pleuronectes).
Klein, E. F. 1868 A ("pleuronecten").
1868 B, 271 (Pleuronectæ).
1879 A, 123 (Pleuronecta).
1884 A, 131, 137, 145, 193, 224, 244, 246.
1885 A, 120, 142, 164, 182, 209, 239.
1886 A, 221, 256, 287.
Kner, R. 1861 A, 235 (Pleuronectes).
Köstlin, O. 1844 A ("plattfische").
Kyle, H. M. 1921 A, 75 ("flat-fishes").
Ledouble, A. F. 1906 A, 551 ("pleuronectidés").
Leunis and Ludwig 1883 A, 714.
Mayhoff, H. 1914 A, 389 ("plattfische").
Meek, A. 1916 A, 256, 411, 414.
M'Donnell, R. 1864 A, 173.
Meckel, J. F. 1825 A ("pleuronecten").
Norman, E. W. 1926 A, 425 (Pleuronectes).
Owen, R. 1845 B, 106 ("pleuronectoids").
1848 B, 90, fig. 16.
1860 E, 149.
1866 A.
Regan, C. T. 1910 C, 490, 493.
1912 B, 850.
Sauvage, H. E. 1872 A, 1118 ("pleuronectes").
Schiödte, J. C. 1868 A, 378.
Schlosser, M. 1917 A, 142 ("pleuronectiden").
Schubert, R. J. 1906 A, 670.
Shepherd, C. E. 1916 A, 178, 184.
Siebenrock, F. 1901 A, 107.
Stannius, H. 1849 A, 539 (Pleuronectes).
1854 A, 5, seq. (Pleuronectides).

Terra, P. 1911 A, 213.
Thilo, O. 1899 A, 175 ("schollen").
1901 A, 315 ("schollen").
1902 A, 305 ("schollen").
1902 B, 717 ("schollen").
1920 A, 119 ("schollen").
Thompson, W. 1865 A, 361.
Tomes, C. S. 1877 A, 45.
1878 A, 45, pl. iv (Pleuronectes).
Traquair, R. H. 1865 A, 263.
1865 B, 215.
Tretjakoff, D. 1925 A, 379, figs. 1-4 ("pleuronectiden").
Van Beneden, P. J. 1853 A, 340 ("pleuronectes").
Wagner, R. 1843 A ("schollen").
Wallace, A. R. 1876 A, ii, 440.
Webb, W. M. 1905 A, 60, figs. 7, 8 ("flat-fish").
Weber, E. H. 1821 A, 1062 (Pleuronectis).
Weiler, W. 1922 A, 74 (otoliths).
Williams, S. R. 1902 A, 1-57 ("flounders").
Wright, E. P. 1878 A, 287, figs. 1-3 ("flounders").
1878 B, 150 ("flounders").
Zittel and Koken 1911 A, 128.
Zittel and Schlosser 1923 A, 149.

EVESTHES Gilbert. Type *E. jordani* Gilbert.

Gilbert, J. Z. 1910 A, 407.
Jordan, D. S. 1925 B, 17.
Jordan and Gilbert 1920 A, 37.

Evesthes jordani Gilbert.

Gilbert, J. Z. 1910 A, 407, pl. xlii.
Jordan, D. S. 1911 A, 436.
1921 A, 263, pl. xxxiv.
Jordan and Gilbert 1919 A, 58, pl. xxv, xxvi.
1920 A, 37, pl. xxiv.
Miocene (Monterey); California.

Evesthes hooveri Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 38, pl. xxvi.
Jordan, D. S. 1921 A, 263, pls. xi, xxxv.
Miocene (Monterey); California.

ZORORHOMBUS Jordan. Type *Zororhombus veliger* Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 39.
1921 A, 264.

Zororhombus veliger Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 39, pl. xxvii.
1921 A, 264.
1921 B, 462, figs. 3, 4.
1922 D, 271, fig. 1.
Miocene (Monterey); California.

Order PERCOMORPHI Cope.

Cope, E. D. 1871 T, 456.
Unless otherwise indicated the authors, as quoted, use for this group the name Acanthopterygii. The writers are not well agreed on the limits of the Order.
Hay, O. P. 1902 A, 400 (Percomorphi).
Abel, O. 1912 F, 441.
1919 A, 157.
Agassiz, L. 1835 I, 99 ("cténoidians").
1840 C, 105 ("cténoides").
1844 D, 139 ("cténoides").
1844 E, 332 ("cténoides").
1845 C, 323 ("cténoides").
Allis, E. P. 1905 A, 464.
1907 A, 569.
Arldt, T. 1907 D, 635 (Acanthopteri).
1923 A, 673 ("acanthopteren").
Bardeleben, K. 1907 A, 36 (Acanthopteri).
Bonaparte, C. L. 1833 B, 1197.
Boulenger, G. A. 1902 B, 298 ("acanthoptery gians").
1902 C, 389.
1904 A, 177 (Acanthopterygii, Percomorphi).
1904 D, 650.
Bridge, T. W. 1896 A, 560.
Bronn, H. G. 1849 A, 589, 830 (Acanthopteri).
Carus, V. 1875 A, 516 (Acanthopteri).
Cockerell, T. D. A. 1913 B, 149 (Percomorphi); 143 (Acanthopteri).
Cope, E. D. 1891 N, 25, 26.
Cunningham, J. T. 1912 A, 247.
Dean, Gudger, Henn 1923 A, 694 (Perciformes).
Dietz, P. A. 1917 A, 81, 86 (Perciformes).
Dollo, L. 1909 B (137) ("acanthoptérygiens").
Eastman, C. R. 1905 A, 55.
1908 A, 64.
1911 A, 20, 45.
Fowler, H. W. 1911 A, 168 (Acanthopteri); 175 (Percomorphi).
Gill, T. 1885 C, 181 (Acanthopterygii).
1905 A, 659.
Goodrich, E. S. 1909 A, 424.
Gregory, W. K. 1907 D, 452 (Acanthopteroidei, Acanthopterygii); 453 (Percomorphi).
Hoernes, R. 1886 A, 532 (Anarthropteri).
Hubbs, C. L. 1919 B, 61.
Ihering, H. 1891 C, 24 ("acanthopterygier").
Jaeckel, O. 1911 A, 95.
Jordan, D. S. 1903 A, 171.
1905 A, ii, 258, 585 (Percomorphi).
1907 B, 473, 765 (Percomorphi).
1923 A, 177 (Percomorphi).
Jordan and Gilbert 1882 A, 397 (Acanthopteri).
Klaatsch, H. 1890 A, 175 ("acanthopterygier").
Klein, E. F. 1884 A, 135, 140, 156 (Acanthopterygia).
1886 A, 207, 236, 251, 274 ("acanthopterygien").
Kner, R. 1860 B, 814 (Acanthopteri).
Köstlin, O. 1844 A ("acanthopterygier").
Latreille, P. A. 1825 A, 128 (Acanthopterygia).
Leunis and Ludwig 1883 A, 658 (Acanthopteri).

Lönnberg, E. 1901 A (Acanthopterygia).
1902 A (Acanthopteri).
Lütken, C. 1868 C (Acanthopteri).
Meek, A. 1916 A, 284, 414.
Müller, J. 1845 A, 102, 130, 135 (Acanthopteri).
1846 C (Acanthopteri).
Owen, R. 1866 A, 112, 193 (Acanthopteri).
Parker and Haswell 1897 A, 205 (Acanthopteri).
Rauther, M. 1913 A, 1103.
Regan, C. T. 1909 A, 70 (Percomorphi).
1909 B, 80, 85 (Percomorphi).
1912 B, 830, 843, 850 (Percomorphi).
1913 B, 111, 113 (Percomorphi).
Richardson, J. 1836 A, 1.
Schlosser, M. 1917 A, 142 ("acanthopterygier").
Stannius, H. 1854 A (Acanthopteri).
Starks, E. C. 1908 A, 415.
Stephan, P. 1898 A, 358 ("acanthopterygiens").
1900 A, 292 ("acanthopterygiens").
Terra, P. 1911 A, 216 (Acanthopteri).
Wagner, R. 1843 A, 204.
Whitehouse, R. H. 1910 C, 141.
1910 H, 610.
Woodward, A. S. 1898 B, 121 (Percomorphi).
1901 A, xi, 384.
1906 C, 281.
Zittel and Koken 1911 A, 128.
Zittel and Schlosser 1923 A, 137.
Zittel and Woodward 1902 A, 104 (Acanthopteri).

Suborder Beryciformes Günther.

Günther, A. C. 1880 A, 419.
Dean, Gudger, Henn 1923 A, 590 (Berycomorphi).
Boulenger, G. A. 1902 C, 389.
Eastman, C. R. 1911 C, 363.
Frost, G. A. 1927 A, 440 (Berycomorphi).
Goodrich, E. S. 1909 A, 426.
Günther, A. C. 1881 A, 689.
Jordan, D. S. 1923 A, 172 (Berycoidei).
Leunis and Ludwig 1883 A, 674.
Regan, C. T. 1909 B, 80 (Berycomorphi).
1911 A, 1-9 (Berycomorphi).
1912 B, 842, 849 (Berycomorphi).
Woodward, A. S. 1901 A, 384.
Zittel and Schlosser 1923 A, 137.

BERYCOIDÆ, new form.

Hay, O. P. 1902 A, 402 (Berycoidea).
Allis, E. P. 1909 A, 201 (Berycoidea).
Arldt, T. 1923 A, 677 ("beryciden").
Boulenger, G. A. 1902 E, 198 (Berycoidea).
Cockerell, T. D. A. 1913 B, 148 (Berycoidea).
Fitzinger, L. J. 1873 A, 29 (Beryces).
Fowler, H. W. 1911 A, 172 (Berycoidei).
Gill, T. 1885 C, 181 (Berycoidea).
Gregory, W. K. 1907 D, 452 (Berycoidei).
Jordan, D. S. 1905 A, ii, 250, 559 (Berycoidei).
Jordan, D. S. 1907 B, 465, 765 (Berycoidei).
Klein, E. F. 1879 A, 89 (Berycidæ).
1884 A, 135, 139, 203, 245 (Berycidæ).
1885 A, 109, 133, 165, 224 (Berycidæ).
1886 A, 207, 237, 274 ("beryciden").
Regan, C. T. 1909 B, 80 (Berycoidei).
Schlosser, M. 1917 A, 140, 142 ("beryciden").
Starks, E. C. 1904 B, 601 ("berycoid fishes").
Woodward, A. S. 1898 C, 259 ("berycoids").
1906 C, 281 ("berycoids").

HOPLOPTERYGIDÆ Cockerell.

Cockerell, T. D. A. 1919 A, 186.
Jordan, D. S. 1923 A, 172.
Regan, C. T. 1911 A, 4 (Berycidæ).

Hoplopteryx Agassiz. Type *H. antiquus* Agassiz.

Agassiz, L. 1843 B (1838), iv, 4.
Hay, O. P. 1902 A, 402 (Beryx).
Cockerell, T. D. A. 1919 A, 186.
Goodrich, E. S. 1909 A, 427.
Regan, C. T. 1911 A, 4.
Woodward, A. S. 1901 A, 396.
Zittel and Koken 1911 A, 131, fig. 242.
Zittel and Schlosser 1923 A, 138, fig. 234.

Hoplopteryx? insculptus (Cope).

Hay, O. P. 1902 A, 402 (Beryx).
Cockerell, T. D. A. 1919 A, 187 (Hoplopteryx?).
Fowler, H. W. 1911 A, 173, fig. 106 (Beryx).
Hussakof, L. 1908 A, 63, fig. 31 (Beryx).
Jordan, D. S. 1905 A, ii, 251 (Beryx).
Woodward, A. S. 1901 A, 386 (Beryx).
Upper Cretaceous (Navesink, Red Bank); New Jersey.

TRICHIUROIDÆ, new form.

Günther, A. C. 1880 A, 433 (Trichiuriformes).
1881 A, 689 (Trichiuriformes).
Regan, C. T. 1909 A, 70 (Trichiuriformes, as "division").
Regan, C. T. 1909 B, 86 (Trichiuriformes, as "division").
1913 B, 111 (Trichiuroidea, as subord.).

GEMPYLIDÆ Gill.

Gill, T. 1893 B, 97.
1862 C, 125, 126 (Gempylinæ).
1862 D, 329 (Gempylinæ).
1893 A, 133 (Gempylinæ).
Günther, A. 1860 A, 342 (Trichiuridæ, in part).
Jordan, D. S. 1923 A, 180.
Jordan and Evermann 1898 A, 877.
Lütken, C. F. 1881 A, 7.
Regan, C. T. 1909 A, 70.
1909 B, 86.

THYRSITES Cuvier. Type *Scomber atun* Euphrasen.

Cuvier, G. 1829, Règne Animal, ed. 2, vol. ii, 200.
Arldt, T. 1923 A, 691.
Frost, G. A. 1928 B, 328, pl. xii.
Jordan and Evermann 1898 A, 878.
Jordan and Gilbert 1919 A, 41, 42.
Lütken, C. F. 1881 A, 7.
Woodward, A. S. 1901 A, 481.

Thyrsites kriegeri Jordan and Gilbert.

Jordan and Gilbert 1919 A, 41, pl. xvii, fig. 2.
Miocene (Monterey); California.

TRICHIURIDÆ Adams, Bakie, Barron.

Adams, Bakie, Barron 1854 A, 98.
Hay, O. P. 1902 A, 403.
Abel, O. 1922 F, 81.
Arldt, T. 1907 D, 686.
1923 A, 690 ("trichiuriden").
Boulenger, G. A. 1904 A, 182.
1904 D, 679.
Carus, V. 1875 A, 531 (Trichiuroidei).
Dean, Gudger, Henn 1923 A, 590, 593, 652.
Gill, T. 1885 C, 206.
Goodrich, E. S. 1909 A, 466.
Günther, A. C. 1860 A, 342.
Hoernes, R. 1886 A, 535.
Jordan, D. S. 1905 A, ii, 267, 596.
1923 A, 180.
Jordan and Gilbert 1882 A, 421.
Klein, E. F. 1885 A, 229.
Meek, A. 1916 A, 331.
Priem, F. 1908 B, 137 ("trichiurides").
Regan, C. T. 1909 A, 71.
Schlosser, M. 1917 A, 143, 148 ("trichiuriden").
Starks, E. C. 1911 B, 19.
Zittel and Koken 1911 A, 136.
Zittel and Schlosser 1923 A, 147.

TRICHIURUS Linn. Type *T. lepturus* Linn.

Hay, O. P. 1902 A, 403.
Arldt, T. 1923 A, 690.
Dean, Gudger, Henn 1923 A, 705.
Duméril, A. 1856 A, 227 ("trichiure").
Frost, G. A. 1928 B, 328, pl. xii.
Giebel, C. G. 1855 A, 104.
Jordan and Evermann 1917 A, 12.
Jordan and Gilbert 1882 A, 422.
Klein, E. F. 1884 A, 135, 185, 212, pl. ii.
1885 A, 202, 229.
1886 A, 243, 279.
Leunis and Ludwig 1883 A, 679.
Lütken, C. F. 1881 A, 7.
Starks, E. C. 1911 B, 25.

Trichiurus lepturus Linn.

Hay, O. P. 1902 A, 403.
1923 A, 363, 366.
Hussakof, L. 1908 A, 102.
Recent West Indies to Virginia: Quaternary; South Carolina.

Suborder SCOMBRIFORMES Günther.

Günther, A. C. 1880 A, 438.
Arldt, T. 1923 A, 689 ("scombriformen").
Boulenger, G. A. 1902 B, 301.
1904 A, 177, 181.
1904 D, 675.
Cunningham, J. T. 1912 A, 247.
Dean, Gudger, Henn 1923 A, 700.
Dietz, P. A. 1914 A, 124.
Eastman, C. R. 1911 C, 364.
Goetsch, W. 1920 A, 494.
Goodrich, E. S. 1909 A, 462.
Gregory, W. K. 1907 D, 454.
Jordan, D. S. 1923 A, 179.
Regan, C. T. 1909 A, 66, 70 (Scombroidei).
1909 B, 81 (Scombroidei).
1912 B, 850 (Scombroidei).
1913 B, 111 (Scombroidea).
Woodward, A. S. 1901 A, 418.
Zittel and Schlosser 1923 A, 145.

SCOMBROIDÆ, new form.

Unless otherwise indicated the authors, as quoted, use for this group the name Scombroidea.
Hay, O. P. 1902 A, 402.
Cockerell, T. D. A. 1913 B, 149.
Frost, G. A. 1928 A, 329.
Gill, T. 1872 C, 8.
1873 F, 9.
1885 C, 182.
Hoernes, R. 1886 A, 535 (Scombroidei).
Jordan, D. S. 1905 A, ii, 258, 591.
1907 B, 473, 765.
Lönnberg, E. 1902 A (Scomberoidei).
Owen, R. 1845 B, 121 ("scomberoids").
Rauther, M. 1913 A, 1103 (Scombriformes).
Regan, C. T. 1909 A, 71 (Scombriformes); 72 (Xiphiformes).
Schlesinger, G. 1909 A (152), (Scombriformes).
Starks, E. C. 1909 A, 574 (Scombroidei).
1910 A, 77 ("scombroids").
1911 B, 1 ("scombroid fishes").

CYBIIDÆ Jordan.

Jordan, D. S. 1925 B, 19.

THYRSION Jordan. Type *T. velox* Jordan.

Jordan and Gilbert 1920 A, 7, 17, 45.
Jordan, D. S. 1925 B, 21.

Thyrsion velox Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert 1920 A, 7, 17, pl. viii (not pl. ix = Diradias fenestralis).

Jordan, D. S. 1925 B, 21, pl. x.
Miocene (Monterey); California.

THYRSOCLES Jordan and Gilbert. Type *T. kriegeri* Jordan.

Jordan and Gilbert 1920 A, 7, 19, 45.
Jordan, D. S. 1925 B, 19.

Thyrsocles kriegeri Jordan and Gilbert.

Jordan and Gilbert 1920 A, 7, 20, 45, pl. xii (not pl. xi = Escharion townleyi).

Jordan, D. S. 1921 A, 273, pl. xxxvi, fig. *a*.
1925 B, 19; 20 (Thyrsocles escharion a syn.?).
1927 B, 90.
Miocene (Monterey); California.

ZAPHLEGES Jordan. Type *Zaphleges longurio* Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 23, 24.
1921 A, 271.

Zaphleges longurio Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 24, pl. xiii.
1921 A, 271, pl. xxxviii, fig. *a*.

Jordan, D. S. 1925 B, 22, pl. xi.
1927 B, 90.
Miocene (Monterey); California.

Zaphleges vigilax Jordan.

Jordan, D. S. 1927 B, 90.
Upper Miocene (Lompoc); California.

ESCHARION Jordan. Type *Thyrocles kriegeri* Jordan, not of Jordan and Gilbert.

Jordan, D. S. 1925 B, 24.

Escharion townleyi Jordan.

Jordan, D. S. 1925 B, 25.

Jordan, D. S., in Jordan and Gilbert, J. Z. 1920 A, 20, pl. xi (Thyrocles kriegeri; not of Jordan and Gilbert).
Miocene (Monterey); California.

TURIO Jordan and Gilbert. Type *Turio wilburi* Jordan and Gilbert.

Jordan and Gilbert 1920 A, 13, 15.
Jordan, D. S. 1921 A, 223.

Turio culveri Jordan.

Jordan, D. S. 1925 B, 23, pl. 10.
Miocene (Monterey); California.

Turio wilburi Jordan and Gilbert.

Jordan and Gilbert 1920 A, 15, pls. vi, vii.
Jordan, D. S. 1921 A, 273, pl. xxxvii.
1925 B, 23.
Miocene (Monterey); California.

STARRIAS Jordan. Type *S. ischyrus* Jordan.

Jordan, D. S. 1925 B, 25.

Starrias ischyrus Jordan.

Jordan, D. S. 1925 B, 25, pl. xii.
Miocene (Monterey); California.

XESTIAS Jordan. Type *X. iratus* Jordan.

Jordan, D. S. 1921 A, 270.

Xestias iratus Jordan.

Jordan, D. S. 1921 A, 270, pl. iv, fig. *a*.
1925 B, 23.
Miocene (Monterey); California.

OCYSTIAS Jordan. Type *Ocystias sagitta* Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert 1920 A, 14, 18.

Ocystias sagitta Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert 1920 A, 18, pl. x.

Jordan, D. S. 1921 A, 273, pl. xxxviii, fig. *a*.
1922 D, 272, fig. 3.
1925 B, 22.
1927 B, 91.
Miocene (Monterey); California.

OZYMANDIAS Jordan. Type *O. gilberti* Jordan.

Jordan, D. S. 1919, in Jordan and Gilbert 1919 A, 43.

The position of this genus is obscure. It may belong to the Scombridæ.

Ozymandias gilberti Jordan.

Jordan, D. S. 1919, in Jordan and Gilbert 1919 A, 43 (Not O. gilberti of Jordan and Gilbert, 1920 A, 36).
1907 A, 134, pl. xi (Luvanus sp.).
1921 A, 275, pl. xiii.
Miocene; California.

SCOMBRIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 91, 107.
Abel, O. 1906 C, 84.
Agassiz, L. 1832 A, 142 ("scomberoiden").
Allis, E. P. 1903 B, 45, pls. i-xii (Scomber).
1909 A, 214 (Scomber).
1919 E, 366 (Scomber).
1922 B, 194, 201, 208 (Scomber).
1923 B, 124 (Scomber).
Arldt, T. 1923 A, 690 ("scombriden").
Baudelot, E. 1873 A, 101 ("scombéroides").
Bonaparte, C. L. 1833 B, 1198.
1838 B, 133.
Boulenger, G. A. 1904 D, 678, 755.
Bridge, T. W. 1896 A, 567.
Carus, V. 1875 A, 533 (Scomberoidei).
Cockerell, T. D. A. 1910 E, 47 ("scombrids").
1913 B, 149.
Cuvier, G. 1805 A ("scombres").
Dean, Gudger, Henn 1923 A, 590, 647, 652.
Dewitz, J. 1904 A, 408 (Scomber).
Dietz, P. A. 1914 A, 124.
Fryd, C. 1901 A, 21 (Scomberidæ).
Fulton, T. W. 1906 A, 57, pl. iii B.
Gaupp, E. 1905 D, 913 (Scomber).
Gill, T. 1862 C, 124 (Scombroidæ).
1862 D, 328-329 ("scombrids").
1885 C, 191.
Goetsch, W. 1920 A, 495.
Goodrich, E. S. 1909 A, 465.
Günther, A. C. 1881 A, 690.
Heckel, J. J. 1856 A, 261 (Scomberoidei).
Jordan, D. S. 1905 A, ii, 258, 272, 470.
1907 A, 133.
1923 A, 179.
1925 B, 26.
Jordan and Evermann 1896 A, 863.
Jordan and Gilbert 1882 A, 422.
Jordan and Gilbert, J. Z. 1920 A, 13.
Kingsley, J. S. 1925 A, 97, 112, fig. 117 (Scomber).
Klein, E. F. 1879 A, 92.
1884 A, 135, 186, 213.
1885 A, 111, 136, 169, 199, 200, 202, 229.
1886 A, 211, 243, 280.
Kner, R. 1861 A, 258 ("scombriden"); 773 (Scomberoidei).
Köstlin, O. 1844 A ("scomberoiden").
Leunis and Ludwig 1883 A, 682.
M'Donnell, R. 1864 A, 172.
Masterman, A. T. 1894 A, 272, pls. xi, xii ("tunny").
Meckel, J. F. 1825 A (Scomber).
Meek, A. 1916 A, 319.
Norman, E. W. 1926 A, 403 (Scomber).
Owen, R. 1845 B, 121 ("scomberoids").
1866 A (Scomberidæ).
Priem, F. 1908 B, 99 ("scombridés").
Regan, C. T. 1903 C, 372.
1909 A, 72.
Schlosser, M. 1917 A, 142 ("scombriden").
Shepherd, C. E. 1910 B, 297.
1912 A, 455.
Siebenrock, F. 1901 A, 107.
Stannius, H. 1849 A, 540 ("scombroiden").
1854 A, 4, seq. (Scomberoidei).
Starks, E. C. 1909 A, 573.
1910 A, 77, 79 (Scombrinæ).
1911 B, 11, 21, 27.
1916 A, 27.
Stephan, P. 1900 A, 286 (Scomber).
Storms, R. 1892 A, 2 ("scombridés").
Terra, P. 1911 A, 216.
Wallace, A. R. 1876 A, ii, 429.
Weiler, W. 1922 A, 77 (otoliths).
Whitehouse, R. H. 1918 A, 138 (Scomber).
Woodward, A. S. 1901 A, 451.
Zittel and Koken 1911 A, 139.
Zittel and Schlosser 1923 A, 146.

AUXIDES Jordan. Type *Thynnus propterygius* Agassiz.

Jordan, D. S. 1919 A, 10, 43.
Hubbs, C. L. 1924 A, 178.
Jordan and Gilbert 1920 A, 13.

Auxides bruntoni Jordan.

Jordan, D. S. 1921 A, 270, pl, ix, fig. *a*.
Miocene (Monterey); California.

Auxides dasson Jordan.

Jordan, D. S. 1921 A, 269, pl. iii, fig. *b;* pl. xxxvi, fig. *a*.
Miocene (Monterey); California.

Auxides sanctæ-monicæ Jordan.

Jordan, D. S. 1919 A, 5, 10, pl. v, fig. 2.
1921 A, 268.
Miocene? (Soledad); California.

SPHYRÆNODUS Agassiz. Type *S. priscus* Agassiz.

Hay, O. P. 1902 A, 399 (Dictyodus).
Bronn, H. G. 1848 B, 1171.
Fowler, H. W. 1911 A, 170 (Dictyodus).
Giebel, C. G. 1855 A, 104.
Leriche, M. 1905 A, 152.
1906 C, 422.
1910 D, 319, fig. 121.
Priem, F. 1908 B, 91.

Stephan, P. 1900 A, 409.
Toula, F. 1905 A, 64.
Woodward, A. S. 1901 A, 473.

Sphyrænodus silovianus (Cope).

Hay, O. P. 1902 A, 399 (Dictyodus).
Eastman, C. R. 1904 H, 92.
Fowler, H. W. 1911 A, 170, fig. 104 (Dictyodus).
Hussakof, L. 1908 A, 71, fig. 37 (Dictyodus).
Woodward, A. S. 1901 A, 368, 616.
Miocene (Kirkwood); New Jersey.

Sphyrænodus speciosus (Leidy).

Hay, O. P. 1902 A, 399 (Dictyodus).
Eastman, C. R. 1904 H, 92, pl. xxxii, fig. 16 (Sphyræna).
Fowler, H. W. 1911 A, 171, fig. 105 (Dictyodus).
Woodward, A. S. 1901 A, 616 (Sphyræna).
Miocene (Calvert); Maryland: (Kirkwood); New Jersey.

XIPHIOIDÆ, new form.

Günther, A. C. 1880 A, 511 (Xiphiiformes).
1881 A, 689 (Xiphiiformes).
Jordan, D. S. 1923 A, 180 (Xiphiiformes).
Regan, C. T. 1909 A, 72 (Xiphiiformes).

XIPHIIDÆ Richardson.

Richardson, J. 1846 A, 276.
Hay, O. P. 1902 A, 402.
Agassiz, L. 1844 D, 142 ("xiphioides").
Allis, E. P. 1909 A, 201, 202.
Arldt, T. 1907 D, 281.
1923 A, 691 ("xiphiiden").
Boulenger, G. A. 1904 A, 182.
1904 D, 681.
Bronn, H. G. 1849 A, 780, seq. (Xiphioidei).
Carus, V. 1875 A, 533 (Xiphioidei).
Carter, J. T. 1919 A, 321, pl. i (Xiphias).
Dean, Gudger, Henn 1923 A, 652, 653.
Gill, T. 1885 C, 203.
Goodrich, E. S. 1909 A, 468.
Goode, G. B. 1882 A, 415.
Jordan, D. S. 1905 A, ii, 269.
1907 B, 484.
1923 A, 181.
Jordan and Evermann 1926 A, 70.
Jordan and Gilbert 1882 A, 419.
Klein, E. F. 1884 A, 135, 139, 186 (Xiphidæ).
1885 A, 138, 172, 231 (Xiphidæ).
1886 A, 212, 246, 274, 281 (Xiphidæ).
Leriche, M. 1910 D, 332.
Leunis and Ludwig 1883 A, 678.
Meek, A. 1916 A, 332.
Priem, F. 1908 B, 99 ("xiphiidés").
1912 A, 233 ("xiphiidés").
Regan, C. T. 1903 C, 372.
1909 A, 74.
Schlosser, M. 1917 A, 142, 144, 148 ("xiphiiden").
Shepherd, C. E. 1912 A, 457.
Stromer, E. 1917 A, 22.
Wagner, R. 1843 A (Xiphias).
Wallace, A. A. R. 1876 A, ii, 430.
Woodward, A. S. 1901 A, 490.
Zittel and Koken 1911 A, 140.
Zittel and Schlosser 1923 A, 148.

CYLINDRACANTHUS Leidy. Type *C. ornatus* Leidy.

Leidy, J. 1856 E, 12.
Hay, O. P. 1902 A, 331 (Cœlorhynchus).
Arldt, T. 1923 A, 700 (Cœlorhynchus).
Bronn, H. G. 1849 A, 675 (Cœlorhynchus).
Fowler, H. W. 1911 A, 141.
Hussakof, L. 1908 A, 44.
Jordan, D. S. 1923 A, 107.
Leidy, J. 1856 A, 422.
Leriche, M. 1905 A, 159 (Glyptorhynchus).
1906 B, 344 (Glyptorhynchus).
1906 C, 254, pl. xiv (Glyptorhynchus).
1909 A, 381.
1910 A, 471.
1910 D, 337.
Newton, E. T. 1891 A, 101 (Cœlorhynchus).
Priem, F. 1903 A, 404 (Cœlorhynchus).
1908 B, 100, 112 (Cœlorhynchus, Glyptorhynchus).
1911 A, 44.
1911 C, 25.
1912 A, 221, fig. 3.
Storms, R. 1891 A, 157 (Cœlorhynchus).
Stromer, E. 1903 A, 29 (Cœlorhynchus).
Williamson, W. C. 1851 A, 667, 697 (Cœlorhynchus).
Woodward, A. S. 1912 A (1911), 192, pl. xli (Cœlorhynchus).
1917 E, lxxviii (Cœlorhynchus).
Zittel and Schlosser 1923 A, 149, fig. 256 (Cœlorhynchus).

Cylindracanthus acus (Cope).

Hay, O. P. 1902 A, 331 (Cœlorhynchus).
Fowler, H. W. 1911 A, 142, fig. 88.
Hussakof, L. 1908 A, 44, fig. 18.
Eocene (Shark River); New Jersey.

Cylindracanthus ornatus Leidy.

Hay, O. P. 1902 A, 331 (Cœlorhynchus).
Cope, E. D. 1869 M, vi, pl. x, fig. 7 (Cœlorhynchus).
Fowler, H. W. 1911 A, 141, fig. 87.
Upper Cretaceous (Manasquan?); New Jersey, Virginia: Eocene (Shark River); New Jersey.

Cylindracanthus sp. indet.

Tuomey, M. 1848 A, 156, 157, 166, 180 (Cœlorhynchus).

Xiphias Linnæus. Type *X gladius* Linnæus.

Allis, E. P. 1909 A, 202.
Arldt, T. 1923 A, 691.
Cuvier, G. 1815 A, 116.
Dean, Gudger, Henn 1923 A, 707.
Dietz, P. A. 1914 A, 108, 126, figs. 14, 15.
Duméril, A. 1856 A, 225, 375.
Eastman, C. R. 1901 B, 111.
1904 H, 93.
1917 A, 298.
Giebel, C. G. 1855 A, 104.
Jordan, D. S. 1905 A, ii, 269, 598.
Jordan and Evermann 1926 A, 71.
Jordan and Gilbert 1882 A, 419.
Leriche, M. 1909 A, 381.
Leriche, M. 1910 D, 333.
Lütken, C. F. 1881 A, 5.
Nopcsa, F. 1926 A, 637, fig. 2.
Owen, R. 1848 B, 46, 52, 57, pl. i, fig. 5.
1866 A, 38, 107, 118, 179.
Regan, C. T. 1924 B, 224, fig. 1.
Shepherd, C. E. 1912 A, 458.
Stannius, H. 1854 A, 4, 75.
Woodward, A. S. 1901 A, 490.
Zittel and Schlosser 1923 A, 148.

Xiphias sp. indet.

Eastman, C. R. 1917 A, 298, pl. xvi, fig. 3.
Phosphate beds; South Carolina.

ISTIOPHORIDÆ Jordan and Evermann.

Jordan and Evermann 1896 A, 890.
Hay, O. P. 1902 A, 402 (Istiophorinæ).
Abel, O. 1912 F, 586, fig. 455 (Histiophorus).
Arldt, T. 1923 A, 691 ("histiophoriden").
Boulenger, G. A. 1904 A, 182 (Histiophoridæ).
1904 D, 679 (Histiophoridæ).
Dean, Gudger, Henn 1923 A, 551, 652 (Histiophoridæ).
Fowler, H. W. 1911 A, 176.
Gill, T. 1885 C, 203 (Histiophoridæ).
Goodrich, E. S. 1909 A, 467 (Histiophoridæ).
Jordan, D. S. 1905 A, ii, 268 (Istiophoridæ).
1907 B, 483.
1923 A, 181.
Jordan and Evermann 1926 A, 27.
Meek, A. 1916 A, 332 (Histiophoridæ).
Regan, C. T. 1909 A, 74 (Histiophoridæ).
Steinmann, G. 1922 A, 75 (Histiophoridæ).
Zittel and Schlosser 1923 A, 148 (Histiophoridæ).

Istiophorus Lacepède. Type *Scomber gladius* Broussonet.

Hay, O. P. 1902 A, 402.
Abel, O. 1912 F, 430, fig. 308 (Histiophorus).
Arldt, T. 1923 A, 691 (Histiophorus).
Carter, J. T. 1919 A, 321, pl. ii (Histiophorus).
Cuvier, G. 1815 A, 117 ("istiophore").
Dean, Gudger, Henn 1923 A, 649, 652 (Histiophorus).
Duméril, A. 1856 A, 380 ("histiophore").
Fowler, H. W. 1911 A, 177.
Giebel, C. G. 1855 A, 104 (Histiophorus).
Jordan, D. S. 1905 A, ii, 269.
1907 B, 484.
Jordan and Evermann 1926 A, 35.
Jordan and Gilbert 1882 A, 421 (Histiophorus).
Klein, E. F. 1884 A, 135, 139, 186, 215 (Histiophorus).
1885 A, 112, 138, 172, 198, 204, 231 (Histiophorus).
1886 A, 207, 212, 246, 281, fig. 43 (Histiophorus).
Köstlin, O. 1844 A.
Leriche, M. 1906 C, 251 (Histiophorus).
1909 A, 381 (Histiophorus).
Lütken, C. F. 1881 A, 5 (Histiophorus).
Owen, R. 1845 B, 121 (Histiophorus).
1866 A, 114 (Histiophorus).
Regan, C. T. 1909 A, 73, fig. (Histiophorus).
Schlesinger, G. 1909 A (152), (Histiophorus).
Woodward, A. S. 1901 A, 495 (Histiophorus).

Istiophorus antiquus (Leidy).

Hay, O. P. 1902 A, 402.
Berry, E. W. 1917 C, 462.
Fowler, H. W. 1911 A, 177.
Woodward, A. S. 1901 A, 495 (Histiophorus).
Upper Cretaceous; New Jersey.

Istiophorus calvertensis Berry.

Berry, E. W. 1927 C, 461, figs. 1, 2.
Miocene (Calvert); Virginia.

Istiophorus homalorhamphus Cope.

Hay, O. P. 1902 A, 402.
Berry, E. W. 1917 C, 463.
Fowler, H. W. 1911 A, 178, fig. 107.
Kümmel, H. B. 1911 A, 180.
Woodward, A. S. 1901 A, 497 (Histiophorus).
Upper Cretaceous (Manasquan); New Jersey.

Istiophorus parvulus Marsh.

Hay, O. P. 1902 A, 402.
Berry, E. W. 1917 C, 463.
Fowler, H. W. 1911 A, 180.
Kümmel, H. B. 1911 A, 180.
Woodward, A. S. 1901 A, 495 (Histiophorus).
Cretaceous (Manasquan); New Jersey.

Istiophorus robustus (Leidy).

Hay, O. P. 1902 A, 402.
Berry, E. B. 1917 C, 462 (Xiphias).
Eastman, C. R. 1901 B, 111 (Xiphias).
Hay, O. P. 1923 A, 363.
Hussakof, L. 1908 A, 78, fig. 40.
Woodward, A. S. 1901 A, 497 (Histiophorus).
Quaternary? or Miocene (Ashley River marls); South Carolina.

Istiophorus rotundus A. S. Woodward.

Woodward, A. S. 1901 A, 495, fig. 18 (Histiophorus).
Tertiary (Phosphate beds); South Carolina.

Istiophorus sp. indet.

Wyman, J. 1854 A, 260. Tertiary; Virginia.

EMBALORHYNCHUS Marsh. Type *E. kinnei* Marsh.

Hay, O. P. 1902 A, 403.
Fowler, H. W. 1911 A, 180.
Jordan, D. S. 1919 B, 359 (E. kinneyi).

Embalorhynchus kinnei Marsh.

Hay, O. P. 1902 A, 403.
Fowler, H. W. 1911 A, 180.
Jordan, D. S. 1919 D, 359 (E. kinneyi).
Kümmel, H. B. 1911 A, 181.
Woodward, A. S. 1901 A, 497.
Upper Cretaceous (Manasquan); New Jersey.

Suborder PERCIFORMES Günther.

Günther, A. C. 1880 A, 374.
Arldt, T. 1923 A, 677 ("perciformen").
Boulenger, G. A. 1895 C, 1.
Cunningham, J. T. 1912 A, 247.
Eastman, C. R. 1911 C, 374.
Frost, G. A. 1927 A, 298.
Günther, A. C. 1881 A, 688.
Rauther, M. 1913 A, 1103.
Regan, C. T. 1909 B, 81, 85 (Percoidei).
1912 B, 850 (Percoidei).
1913 B, 112 (Percoidea).
Whitehouse, R. H. 1910 B, 611.
Woodward, A. S. 1901 A, 494.
Zittel and Schlosser 1923 A, 138.

PERCOIDÆ, new form.

Hay, O. P. 1902 A, 403 (Percoidea); 405 (Sciænoidea).
Bronn, H. G. 1849 A, 780, seq. (Percoidei, Sciænoidei).
Cockerell, T. D. A. 1910 E, 47 ("percoids").
1913 B, 150 (Percoidea).
Gill, T. 1872 C, 10 (Percoidea).
1885 C, 213 (Percoidea).
Gregory, W. K. 1907 D, 453 (Percoidea).
Hoernes, R. 1886 A, 537 (Sciænoidei).
Jordan, D. S. 1905 A, ii, 293, 585 (Percoidea).
1907 B, 508, 766 (Percoidea).
Lönnberg, E. 1902 A (Percoidea, Sciænoidea).
Regan, C. T. 1909 B, 81, 85 (Percoidei).
1910 C, 490 (Percoidea).
1912 B, 850 (Percoidei).
1913 B, 112 (Percoidea).
Stannius, H. 1854 A (Percoidei).
Starks, E. C. 1909 A, 574 (Percoidea).
The terms employed by the authors, as cited above, are by no means synonymous.

CENTRARCHIDÆ Gill.

Gill, T. 1872 C, 10.
Arldt, T. 1923 A, 678 ("centrarchiden").
Boulenger, G. A. 1895 C, 2.
1904 A, 179.
1904 D, 657.
Cockerell, T. D. A. 1913 B, 150.
1914 A, 191.
1919 A, 188.
Creaser, C. W. 1926 A, 4.
Dean, Gudger, Henn 1923 A, 673.
Gill, T. 1864 A, 92 ("centrarchoids").
Gill, T. 1885 C, 230.
Goodrich, E. S. 1909 A, 443.
Jordan, D. S. 1905 A, ii, 297, 562.
1907 B, 512.
1923 A, 189.
Jordan and Evermann 1896 A, 984.
Jordan and Gilbert 1882 A, 462.
Meek, A. 1916 A, 285.
Regan, C. T. 1913 B, 115.
1916 B, 547.
Storms, R. 1896 A, 212.

MICROPTERUS Lacepède. Type *M. dolomieu* Lacepède.

Lacepède, B. G. E. 1803, Hist. Nat. Poiss., iv, 325.
Cockerell, T. D. A. 1913 B, 144, 150, 151.
Dean, Gudger, Henn 1923 A, 689.
Frost, G. A. 1927 A, 301, pl. v.
Jordan, D. S. 1905 A, ii, 301, figs. 238, 239.
1907 B, 134, 516, figs. 88, 407, 408.
Jordan and Evermann 1896 A, 1010.
1917 A, 63.
Jordan and Gilbert 1882 A, 484.
Shufeldt, R. W. 1884 B, 532, 749, fig.
1901 E, 311, pl. xliv; text-figs. 1-8.

Micropterus sp. indet.

Matthew, W. D. 1924 C, 68 (This genus?). Upper Miocene (Lower Snake Creek); Nebraska.

LEPOMIS Rafinesque. Type *Labrus auritus* Linnæus.

Rafinesque, C. S. 1819, Jour. Physique, 1819, 420.
Barney and Anson 1923 A, 1-16, 7 figs.
Cockerell, T. D. A. 1913 B, 150.
Dean, Gudger, Henn 1923 A, 687.
Hubbs, C. L. 1922 A, 361, figs. 2, 3, 6.
Jordan, D. S. 1905, I, 4, fig. 2; II, 301, fig. 236.
Jordan and Evermann 1896 A, 999.
Jordan and Gilbert 1882 A, 472.

Lepomis sp. indet.

Baker, F. C. 1920 A, 462. Pleistocene (Wisconsin); Illinois.
Hay, O. P. 1923 A, 336. Pleistocene (Wisconsin); Illinois.

CENTRARCHITES Cockerell. Type *C. coloradensis* Cockerell.

Cockerell, T. D. A. 1919 A, 188.

Centrarchites coloradensis Cockerell.

Cockerell, T. D. A. 1919 A, 188, pl. xxxvi, fig. 12.
Eocene (Coalmont); Colorado.

PRISCACARIDÆ Jordan.

Jordan, D. S. 1923 A, 218.
Hay, O. P. 1902 A, 401 (Pomacentridæ).
Haseman, J. D. 1912 A, 97 (Cichlidæ).

PRISCACARA Cope. Type *P. serrata* Cope.

Hay, O. P. 1902 A, 401.
Arldt, T. 1923 A, 687.
Cockerell, T. D. A. 1908 C, 178.
1913 B, 166.
1915 A, 31.
1923 B, 2.
Eastman, C. R. 1917 A, 296.
Haseman, J. D. 1912 A, 97.
Ihering, H. 1909 A, 289.
Jordan, D. S. 1903 A, 137.
1905 A, ii, 381.
1907 B, 592.
1923 A, 218.
1927 C, 147.
Meek, A. 1916 A, 313.
Regan, C. T. 1916 B, 547.
Schlosser, M. 1917 A, 144.
Toula, F. 1905 A, 69.
Woodward, A. S. 1901 A, 554.
Zittel and Koken 1911 A, 133.
Zittel and Schlosser 1923 A, 142.

Priscacara clivosa Cope.

Hay, O. P. 1902 A, 401.
Cockerell, T. D. A. 1908 C, 178.
Eastman, C. R. 1917 A, 296.
Jordan, D. S. 1905 A, ii, 381.
1907 B, 592.
Merrill, G. P. 1907 A, 16.
Woodward, A. S. 1901 A, 554.
Eocene (Green River); Wyoming.

Priscacara cypha Cope.

Hay, O. P. 1902 A, 401.
Cockerell, T. D. A. 1908 C, 178.
Merrill, G. P. 1907 A, 16.
Woodward, A. S. 1901 A, 555.
Eocene (Green River); Wyoming.

Priscacara dartonæ Eastman.

Eastman, C. R. 1917 A, 296, pl. xxiii.
Shufeldt, R. W. 1917 C, 50, fig.
Eocene (Green River); Wyoming.

Priscacara hypsacantha Cope.

Hay, O. P. 1902 A, 401.
Cockerell, T. D. A. 1908 C, 178.
Hussakof, L. 1908 A, 90.
Eocene (Green River); Wyoming.

Priscacara oxyprion Cope.

Hay, O. P. 1902 A, 401.
Cockerell, T. D. A. 1908 C, 178.
Eastman, C. R. 1917 A, 296.
Haseman, J. D. 1912 A, 100.
Hussakof, L. 1908 A, 90.
Merrill, G. P. 1907 A, 16.
Tanner, V. M. 1925 A, 12.
Woodward, A. S. 1901 A, 555.
Eocene (Green River); Wyoming.

Priscacara pealei Cope.

Hay, O. P. 1902 A, 401.
Cockerell, T. D. A. 1908 C, 178.
Eastman, C. R. 1917 A, 296.
Merrill, G. P. 1907 A, 17.
Tanner, V. M. 1925 A, 12.
Woodward, A. S. 1901 A, 555.
Eocene (Green River); Wyoming, Utah.

Priscacara serrata Cope.

Hay, O. P. 1902 A, 401.
Cockerell, T. D. A. 1908 C, 178.
Eastman, C. R. 1917 A, 296.
Haseman, J. D. 1912 A, 97.
Hussakof, L. 1908 A, 92.
Jordan, D. S. 1927 C, 147.
Merrill, G. P. 1907 A, 17.
Toula, F. 1905 A, 69, fig. 3.
Woodward, A. S. 1901 A, 554.
Eocene (Green River); Wyoming.

Priscacara testudinaria Cope.

Hay, O. P. 1902 A, 402.
Eastman, C. R. 1917 A, 296.
Hussakof, L. 1908 A, 92.
Eocene (Manti); Utah.

Priscacara sp. indet.

Cope, E. D. 1884 O, 93. Eocene (Washakie); Wyoming.

COCKERELLITES Jordan. Type *Priscacara liops* Cope.

Jordan, D. S. 1923 A, 218.
1927 C, 147.

Cockerellites liops (Cope).

Hay, O. P. 1902 A, 401 (Priscacara).
Cockerell, T. D. A. 1908 C, 178 (Priscacara).
Eastman, C. R. 1917 A, 296 (Priscacara).
Hussakof, L. 1908 A, 70 (Priscacara).
Jordan, D. S. 1927 C, 147 (P. liops Cope).
Merrill, G. P. 1907 A, 16 (Priscacara).
Woodward, A. S. 1901 A, 555 (Priscacara).
Eocene (Green River); Wyoming.

CHROMIDIDÆ Bonaparte.

Bonaparte, C. L. 1840 A, 296.
Unless otherwise indicated the authors, as cited, use for this family the name Cichlidæ. Chromididæ appears to be older. Citations are made to the literature of the Pomacentridæ.
Hay, O. P. 1902 A, 401 (Pomacentridæ).
Arldt, T. 1907 D, 675 (Pomacentridæ).
Boulenger, G. A. 1904 A, 180.
1904 D, 670 (Cichlidæ); 672 (Pomacentridæ).
1917 B, 330.
1919 A, 42 ("cichlides" or "chromides").
Cockerell, T. D. A. 1913 B, 165 (Pomacentridæ, Cichlidæ).
1915 A, 31.
Cope, E. D. 1871 T, 459 (Pomacentridæ, Chromididæ).
1872 C, 343 (Pomacentridæ, Chromididæ).
Eastman, C. R. 1912 B, 372.
1917 A, 296.
Fitzinger, L. J. 1873 A, 31 (Pomacentri).
Gill, T. 1872 B, 7.
1885 B, 35 (Pomacentridæ); 235 (Cichlidæ).
Goode and Bean 1895 A, 243 (Pomacentridæ).
Goodrich, E. S. 1909 A, 446 (Pomacentridæ, Cichlidæ).
Günther, A. 1862 A, 1 (Pomacentridæ); 265 (Chromides).
Haseman, J. D. 1912 A, 97.
Jordan, D. S. 1903 A, 137 ("pomacentrids").
1905 A, ii, 381, 587 (Pomacentridæ); 380, 563 (Cichlidæ).
1907 B, 591 (Pomacentridæ, Cichlidæ).
1927 C, 147 (Cichlidæ).
Jordan and Evermann 1896 A, 1512.
Jordan and Gilbert 1882 A, 607.
Kner, R. 1861 B, 143 (Pomacentrini).
Leunis and Ludwig 1883 A, 704 (Pomacentridæ).
Loomis, F. B. 1921 A, 194.
Meek, A. 1916 A, 312.
Regan, C. T. 1913 B, 112 (Pomacentridæ); 112, 130 (Cichlidæ).
1916 B, 546.
1922 B, 249.
Richardson, J. 1854 A, 265 (Pomacentridæ).
1856 A, 265 (Chromididæ).
Shepherd, C. E. 1913 A, 388.
Stannius, H. 1854 A, 5, seq. (Chromides).
Wallace, A. R. 1876 A, ii, 437.
Woodward, A. S. 1901 A, 554 (Chromidæ); 555 (Pomacentridæ).
Zittel and Koken 1911 A, 133 (Pomacentridæ).
Zittel and Woodward 1902 A, 103 (Pomacentridæ).

KINDLEIA Jordan. Type *K. fragosa* Jordan.

Jordan, D. S. 1927 C, 145.

Kindleia fragosa Jordan.

Jordan, D. S. 1927 C, 145, figs. 1-14.
Russell, L. S. 1928 B, 264.
Upper Cretaceous (Paleocene, Paskapoo); Alberta.

PERCIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 89, 100.
Hay, O. P. 1902 A, 404.
Agassiz, L. 1840 C, 110, pl. iv, fig. 8 (Perca).
1844 D, 142 ("percoides").
Arldt, T. 1907 D, 672.
1912 A, 760.
1923 A, 680 ("perciden").
Bassoli, G. G. 1906 A, 51, pl. ii (otoliths).
Baudelot, E. 1873 A, 98, 130 (Perca).
Bonaparte, C. L. 1833 B, 1197.
1838 B, 132.
Boulenger, G. A. 1895 C, 1 (Perciformes).
1904 A, 179.
1904 D, 658.
Brauer, A. 1914 A, 284.
Bridge, T. W. 1896 A, 564.
Carlet, G. 1878 A, 8 ("perche").
Carus, V. 1875 A, 518 (Percoidei).
Cockerell, T. D. A. 1913 B, 143, 153.
Cunningham, J. T. 1912 A, 266.
Cuvier, G. 1805 A ("perches").
Dean, Gudger, Henn 1923 A, 694.
Dietz, P. A. 1914 A, 112.
Dormitzer, M. 1852 A, 62 ("perciden").
Duméril, A. 1856 A, 270 ("percoïdes").
Eastman, C. R. 1917 A, 294.
Fitzinger, L. J. 1873 A, 29 (Percæ).
Frost, G. A. 1927 A, 298 (Perca).
Fryd, C. 1901 A, 19.
Giebel, C. G. 1855 A, 100 (Percoidei).
Gill, T. 1875 B, 252.
1885 C, 227.
Goetsch, W. 1920 A, 439, 444 (Perca).
Goodrich, E. S. 1909 A, 441.
Hase, A. 1907 A.
1911 B, 339 (Perca).
Hasse, C. 1872 A, figs. (Perca).
Hasse and Schwarck 1870 A, 30 (Perca).
Heckel, J. 1850 B, 146 ("perciden").
Hoernes, R. 1886 A, 538 (Percoidei).
Hubbs, C. L. 1926 A, 58 ("percids").
Huxley, T. H. 1859 H, 37.
Jordan, D. S. 1905 A, ii, 304, 585.
1907 B, 519.
1923 A, 186.
Jordan and Gilbert 1882 A, 486.
Klaatsch, H. 1890 A, 193, 195 (Perca).
Klein, E. F. 1879 A, 69, 70, 81, 115.
1884 A, 135, 139, 181, 204.
1885 A, 133, 199.
1886 A, 205, 239, 275.
Kner, R. 1862 A, 65 (Percoidei).
Köstlin, O. 1844 A ("percoiden").
Kolzoff, N. K. 1896 A, 518, fig. 7 (Perca).
Leunis and Ludwig 1883 A, 660.
M'Donnell, R. 1864 A, 171.
Meckel, J. F. 1825 A (Perca).
Meek, A. 1916 A, 287.
Owen, R. 1866 A, 11, 378.
Porta, A. 1905 A, 240.

Priem, F. 1906 B, 269, figs. 11-25.
1914 B, 246, 256, figs. 3-5, 23-31 ("percidarum").
Regan, C. T. 1913 B, 116.
Richardson, J. 1836 A, 30 (Percoideæ).
Rosén, N. 1915 A, 6, pl. i (Perca).
Sachs, M. M. 1912 A, 726.
Sagemehl, M. 1884 A, 102 (Perca).
Salbey, R. 1868 A, 748, pl. xviii.
Scharff, R. F. 1909 B, 18.
1911 A, 198.
Schlosser, M. 1917 A, 140, 142 ("perciden").
Schubert, R. J. 1906 A, 625.
Siebenrock, F. 1901 A, 106.
Stannius, H. 1849 A, 539 (Perca).
1854 A, 4, seq. (Percoidei).
Starks, E. C. 1916 A, 29 ("percoid fishes").
Stephan, P. 1900 A, 301 (Perca).
Storms, R. 1896 A, 212.
Supino, F. 1904 A, 628.
Tomes, O. S. 1876 A, 262, pl. xxxi ("perch").
Vaillant, L. 1874 A, 406 ("percoides").
Wagner, R. 1843 A (Perca).
Wallace, A. R. 1876 A, ii, 425.
Weber, E. H. 1821 A, 1080 (Perca).
Weiler, W. 1922 A, 76 (otoliths).
Williamson, W. C. 1851 A, 651, 690, pl. xxviii, figs. 10-12 ("perch").
Woodward, A. S. 1901 A, 498.
Zittel and Koken 1911 A, 132.
Zittel and Schlosser 1923 A, 141, figs. 16, 26.
Zittel and Woodward 1902 A, 104.

Mioplosus Cope. Type *M. labracoides* Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 177.
Eastman, C. R. 1917 A, 294.
Hussakof, L. 1916 C, 348.
Seeley, H. G. 1886 A, 412.
Woodward, A. S. 1901 A, 517.

Mioplosus abbreviatus Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 177.
Hussakof, L. 1908 A, 81, fig. 42.
Woodward, A. S. 1901 A, 518.
Eocene (Green River); Wyoming.

Mioplosus beani Cope.

Hay, O. P. 1902 A, 404.
Cockerell, T. D. A. 1908 C, 177.
Merrill, G. P. 1907 A, 13.
Woodward, A. S. 1901 A, 518.
Lower Eocene (Green River); Wyoming.

Mioplosus labracoides Cope.

Hay, O. P. 1902 A, 405.
Cockerell, T. D. A. 1908 C, 177.
Eastman, C. R. 1917 A, 294, pl. xxi.
Hussakof, L. 1908 A, 81.
Jordan, D. S. 1905 A, ii, 315.
Meek, A. 1916 A, 297.
Tanner, V. M. 1925 A, 6.
Toula, F. 1905 A, 70, fig. 4.
Woodward, A. S. 1901 A, 517.
Lower Eocene (Green River); Wyoming.

Mioplosus longus Cope.

Hay, O. P. 1902 A, 405.
Cockerell, T. D. A. 1908 C, 177.
Eastman, C. R. 1917 A, 295.
Merrill, G. P. 1907 A, 13.
Woodward, A. S. 1901 A, 518.
Lower Eocene (Green River); Wyoming.

Mioplosus sauvageanus Cope.

Hay, O. P. 1902 A, 405.
Cockerell, T. D. A. 1908 C, 177.
Woodward, A. S. 1901 A, 518.
Lower Eocene (Green River); Wyoming.

Eoperca Jordan. Type *Mioplosus multidentatus* Cope.

Jordan, D. S. 1919 A, 12.

Eoperca multidentatus (Cope).

Hay, O. P. 1902 A, 405 (Mioplosus).
Eastman, C. R. 1917 A, 295 (Mioplosus).
Jordan, D. S. 1919 A, 12.
Woodward, A. S. 1901 A, 518 (Mioplosus).
Tertiary (Oligocene?); Wyoming.

Plioplarchus Cope. Type *P. whitei* Cope.

Hay, O. P. 1902 A, 405.
Cockerell, T. D. A. 1914 A, 191.
Dall and Harris 1892 A, 281.
Eastman, C. R. 1917 A, 295.
Jordan, D. S. 1907 B, 519.

Plioplarchus septemspinosus Cope.

Hay, O. P. 1902 A, 405.
Cockerell, T. D. A. 1914 A, 191.
Dall and Harris 1892 A, 281.
Eastman, C. R. 1917 A, 295, pl. xxii.
Merriam, J. C. 1901 A, 308 ("Plioplarchus").
Merriam and Sinclair 1907 A, 196.
Merrill, G. P. 1907 A, 16.
Woodward, A. S. 1901 A, 520.
Miocene (Mascall?); Oregon.

Plioplarchus sexspinosus Cope.

Hay, O. P. 1902 A, 405.
Eastman, C. R. 1917 A, 295, pl. xv, fig. 1.
Merrill, G. P. 1907 A, 16.
Woodward, A. S. 1901 A, 520.
Tertiary; North Dakota.

Plioplarchus whitei Cope.

Hay, O. P. 1902 A, 405.
Dall and Harris 1892 A, 281.
Eastman, C. R. 1917 A, 295.
Jordan, D. S. 1920 C, 422 (P. whitii).
Merrill, G. P. 1907 A, 16.
Woodward, A. S. 1901 A, 520.
Tertiary; North Dakota.

OLIGOPLARCHUS Cope. Type *O. squamipinnis* Cope.

Hay, O. P. 1902 A, 405.

Oligoplarchus squamipinnis Cope.

Hay, O. P. 1902 A, 405.

Cockerell, T. D. A. 1914 A, 191.
Woodward, A. S. 1901 A, 519.
Oligocene?; South Dakota.

STOMIATIDÆ Günther.

Günther, A. C. 1864 A, 424.
Boulenger, G. A. 1904 D, 570.
Jordan, D. S. 1885 A, 140.
1905 A, ii, 128.
Jordan, D. S. 1923 A, 126.
Jordan and Evermann 1896 A, 587.
Jordan and Gilbert 1882 A, 285.
Regan, C. T. 1923 A, 614.

EOSTOMIAS Jordan and Gilbert. Type *E. eximius* Jordan and Gilbert.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 B, 13.

Eostomias eximius.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 B, 13, pl. iii.
Miocene (Monterey); California.

POMATOMIDÆ Gill.

Gill, T. 1865, Canad. Natural., Geol. (n. s.), 246, 249.
Boulenger, G. A. 1904 D.
Dean, Gudger, Henn 1923 A, 649 (Pomatominæ).
Gill, T. 1883 F, 557.
1885 C, 182.
Jordan, D. S. 1905 A, ii, 278.
1907 B, 493 (Cheilodipteridæ).
1923 A, 186.
Jordan and Evermann 1898 A, 945.
Jordan and Gilbert 1882 A, 447.
Regan, C. T. 1913 B, 117.

LOPHAR Jordan and Gilbert. Type *L. miocænus* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 44, 47.
Jordan, D. S. 1921 A, 277.
1925 B, 26.

Lophar miocænus Jordan and Gilbert.

Jordan and Gilbert 1919 A, 44, pl. iii, fig. 2, pls. xix, xx.
Jordan, D. S. 1921 A, 277.
Miocene (Monterey); California.

ELEPHENORIDÆ Jordan.

Jordan, D. S. 1919, Ann. Carnegie Mus., xii, 330.

Jordan, D. S. 1925 B, 45.

ABANTIS Jordan and Gilbert. Type *A. velifer* Jordan and Gilbert.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 B, 45.

Abantis velifer Jordan and Gilbert.

Jordan and Gilbert, J. Z., in Jordan, D. S. 1925 45, pls. xx, xxi.
Upper Miocene; California.

SERRANIDÆ Richardson.

Richardson, J. 1846 A, 229.
Agassiz, L. 1840 C, 103, pl. v, fig. 22 (Serranus).
Arldt, T. 1923 A, 681 ("serraniden").
Boulenger, G. A. 1895 C, 113.
1901 A, 270.
1901 D, 379.
1904 D, 659, 755.
Carus, V. 1875 A, 519 (Serranina).
Cockerell, T. D. A. 1913 B, 143, 158.
Dean, Gudger, Henn 1923 A, 402, 648.
Fitzinger, L. J. 1873 A, 30 (Serrani).
Geoffroy St. Hilaire, E. F. 1824 D, 422, pl. xxi (Serranus).
Gill, T. 1872 C, 11.
1885 B, 35.
1885 C, 223.
Goodrich, E. S. 1909 A, 430.
Günther, A. C. 1859 A, 51, 81 (Serranina).
Hubbs, C. L. 1919 B, 71.
Jordan, D. S. 1905 A, ii, 592.
1907 B, 534.
1923 A, 193.
Jordan and Evermann 1896 A, 1126.
Jordan and Gilbert 1882 A, 526.
Kesteven, H. L. 1922 A, 308.
Klein, E. F. 1879 A, 81 (Serranina).
1885 A, 174 (Serranus).
Meek, A. 1916 A, 291.
Priem, F. 1906 B, 267 (Serranus).
1908 B, 112 ("serranidés").
1914 B, 248, 260, figs. 7, 32-40 ("otoliths").
Regan, C. T. 1913 B, 113.
Schlosser, M. 1917 A, 142 ("serraniden").
Schmalhausen, J. J. 1916 C, 214, figs. 1-5 (Serranus).
Shepherd, C. E. 1916 A, 204.

Starks, E. C. 1909 A, 573.
Stephan, P. 1900 A, 321 (Serranus).
Storms, R. 1896 A, 211.
Vaillant, L. 1874 A, 407 (Serranus).
Zittel and Sch'osser 1923 A, 139.

EMMACHÆRE Jordan and Gilbert. Type *E. rhachites* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 59.
Jordan, D. S. 1927 B, 93 (Referred to the Epinephalidæ).
Jordan and Gilbert 1920 A, 26.

Emmachære rhachites Jordan and Gilbert.

Jordan and Gilbert 1919 A, 59, pl. xxviii, fig. 2.
1920 A, 26, pl. xv.
Jordan, D. S. 1921 A, 277.
Miocene (Monterey); California.

Emmachære rhomalea Jordan.

Jordan, D. S. 1921 A, 278, pl. xliii.
1922 D, 273, fig. 5.
1925 B, 30.
1927 B, 93.
Jordan and Gilbert 1920 A, 26 (in part), pl. xvi (E. rhachites; not E. rhachites Jordan and Gilbert, 1919 A, pl. xxviii.
Miocene (Monterey); California.

APOGONIDÆ Jordan and Gilbert.

Jordan and Gilbert 1882 A, 563.
Dean, Gudger, Henn 1923 A, 375, 579, 601 (Apogon).
Frost, G. A. 1927 A, 302, pl. v.
Günther, A. C. 1859 A, 222 (Apogonina).
Jordan, D. S. 1905 A, ii, 316.
1907 B, 531.
1923 A, 188.
Jordan and Evermann 1896 A, 1105 (Cheilodipterinæ).
Shepherd, C. E. 1916 A, 183, 204 (Apogon).

ERITIMA Jordan and Gilbert. Type *E. evides* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 40.

Eritima evides Jordan and Gilbert.

Jordan and Gilbert 1919 A, 40, pl. xxviii, fig. 1.
Jordan, D. S. 1921 A, 277, pl. xlii.
Miocene (Monterey?); California.

CARANGIDÆ Günther.

Günther, A. C. 1860 A, 417.
Hay, O. P. 1902 A, 403.
Abel, O. 1912 F, 127 ("carangiden").
Allis, E. P. 1909 A, 201.
Arldt, T. 1907 D, 643.
1923 A, 689 ("carangiden").
Boulenger, G. A. 1902 B, 299.
1904 A, 181.
1904 D, 677.
1917 B, 329.
Bridge, T. W. 1896 A, 569.
Carus, V. 1875 A, 532 (Carangoidei).
Cockerell, T. D. A. 1913 B, 149.
Dean, Gudger, Henn 1923 A, 590, 651, 652.
Dietz, P. A. 1914 A, 124.
Fitzinger, L. J. 1873 A, 33 (Caranges).
Frost, G. A. 1927 A, 302 pl. v.
Fryd, C. 1901 A, 21.
Gill, T. 1883 G, 487, 492.
1885 B, 35.
1885 C, 187.
Goodrich, E. S. 1909 A, 464.
Günther, A. C. 1881 A, 689.
Jordan, D. S. 1905 A, ii, 272, 561.
1907 B, 487.
1923 A, 184.
Jordan, D. S. 1925 B, 26.
Jordan and Gilbert 1882 A, 430.
Klein, E. F. 1884 A, 135, 139, 181, 213.
1885 A, 109, 138, 163, 199, 200, 203, 231 (Carangidæ, Carangina).
1886 A, 211, 244, 281.
Kner, R. 1861 A, 776 ("carangiden").
Leriche, M. 1910 D, 305.
Leunis and Ludwig 1883 A, 680.
Meek, A. 1916 A, 315.
Regan, C. T. 1909 A, 67, 68.
1912 B, 850.
1913 B, 118.
Schlosser, M. 1917 A, 139, 140, 142 ("carangiden").
Shepherd, C. E. 1911 A, 138.
Siebenrock, F. 1901 A, 107.
Starks, E. C. 1909 A, 572.
1911 B, 27.
1916 A, 28.
Toula, F. 1905 A, 75.
Wallace, A. R. 1876 A, ii, 429.
Woodward, A S. 1901 A, 418, 427.
Zittel and Koken 1911 A, 137.
Zittel and Schlosser 1923 A, 145.
Zittel and Woodward 1902 A, 107.

CARANX Lacepède. Type *Scomber carangus* Bloch.

Lacepède, B. G. 1802, Hist. Nat. Poissons, iii, 57.
Cockerell, T. D. A. 1913 B, 149, pl. xxxvi, fig. 27.
Dean, Gudger, Henn 1923 A, 673.
Dietz, P. A. 1914 A, 125, fig. 13.
Edgeworth, F. H. 1926 A. 186.
Fryd, C. 1901 A, 21.
Goetsch, W. 1920 A, 494, pl. xxii.
Hay, O. P. 1923 A, 383.
Jordan and Evermann 1896 A, 915.
1917 A, 60.

Jordan and Gilbert 1882 A, 433, 970.
Klein, E. F. 1879 A, 95.
1886 A, 244.
Lütken, C. F. 1881 A, 114.
Meek, A. 1916 A, 315.
Owen, R. 1845 B, 121.
Shepherd, C. E. 1910 B, 292, pl. i, fig. 7.
1911 A, 140.
Siebenrock, F. 1901 A, 107.
Stannius, H. 1854 A.
Starks, E. C. 1911 B, 32.
Woodward, A. S. 1901 A, 441.

Caranx hippos Linnæus.

Hay, O. P. 1917 E, 43.
1923 A, 382.
Jordan and Evermann 1896 A, 920, pl. clxi, fig. 387.
Siebenrock, F. 1901 A, 107.
Pleistocene; Florida.

Caranx sp. indet.

Hay, O. P. 1923 A, 382. Pleistocene; Florida.

HEMICARANX Bleeker. Type *H. marginatus*.

Bleeker, P. 1862, Verh. Akad. Amsterdam, XIV, 134.
Jordan and Evermann 1896 A, 912.

Hemicaranx archæus Jordan.

Jordan, D. S. 1927 B, 92.
Upper Miocene (Lompoc); California.

SERIOLIDÆ Jordan.

Jordan, D. S. 1925 B, 26

TUNITA Jordan and Gilbert. Type *T. octavia* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 42.
Jordan, D. S. 1925 B, 29.
Jordan and Gilbert 1920 A, 13.

Tunita octavia Jordan and Gilbert.

Jordan and Gilbert 1919 A, 42, pl. xii, fig. 2.
Jordan, D. S. 1921 A, 271, pl. xxxix.
Jordan, D. S. 1925 B, 29.
Miocene (Monterey); California.

Tunita sp. indet.

Jordan, D. S. 1921 A, 271. Miocene? California.
1925 B, 45. Miocene (Puente); California.

SERIOLA Cuvier. Type *Caranx dumerili* Risso.

Cuvier, G. 1829, Règne Anim., ed. 2, II, 218.
Gill, T. 1885 C, 190.
Goodrich, E. S. 1909 A, 464.
Günther, A. C. 1860 A, 462.
Jordan, D. S. 1905 A, ii, 272.
1907 B, 487.
1921 A, 276.
1925 B, 26.
Jordan and Evermann 1896 A, 901.
Jordan and Gilbert 1882 A, 444.
Woodward, A. S. 1901 A, 444.
Zittel, K. A. 1890 A, 305.

Seriola sanctæ-barbaræ Jordan.

Jordan, D. S. 1921 A, 275, pls. vii, xl.
Miocene (Monterey); California.

Seriola sanctæ-ineziæ Jordan.

Jordan, D. S. 1925 B, 26, pl. xiii.
Miocene (Monterey); California.

ALICIOLA Jordan. Type *A. starksi* Jordan.

Jordan, D. S. 1925 B, 27.

Aliciola starksi Jordan.

Jordan, D. S. 1925 B, 27, pl. xiv.
Miocene (Monterey); California.

LOMPOCHITES Jordan. Type *Lompochites hopkinsi* Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 30, 45.
1925 B, 26, 29.

Lompochites hopkinsi Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 30.
Jordan, D. S. 1921 A, 276, pl. xli, fig. *b*.
1922 D, 272, fig. 4.
1925 B, 29.
1927 B, 92.
Miocene (Monterey); California.

CORONADUS Jordan. Type *C. agilis* Jordan.

Jordan, D. S. 1925 B, 28.

Coronadus agilis Jordan.

Jordan, D. S. 1925 B, 28, pl. xiv.
1927 B, 92.
Miocene (Monterey); California.

Coronadus stocktoni Jordan.

Jordan, D. S. 1927 B, 92.
Upper Miocene (Lompoc); California.

IRIFERA Jordan. Type *I. ringens* Jordan.

Jordan, D. S. 1927 B, 7.

Irifera ringens Jordan.

Jordan, D S. 1927 B, 91.
Upper Miocene (Lompoc); California.

LUTIANIDÆ Gill.

Gill, T. 1884 G, 352 (Lutjaninæ, Lutjanidæ).
Cockerell, T. D. A. 1913 B, 160.
Dean, Gudger, Henn 1923 A, 590, 649 (Lutjaninæ).
Gill, T. 1885 C, 222 (Lutjanidæ).
1893 A, 134 (Lutjanidæ).
Gill, T. 1893 B, 116 (Lutjanidæ).
Jordan, D. S. 1923 A, 195.
Jordan and Evermann 1898 A, 1241.
Jordan and Gilbert 1882 A, 546 (Lutjaninæ).
Regan, C. T. 1913 B, 120.

NEOMÆNIS Girard. Type *Lobotes emarginatus* Baird and Girard = *Labrus griseus* Linn.

Girard, C. F. 1859, Proc. Acad. Nat. Sci. Phila., 1858 (1859), 167.
Girard, C. F. 1859, Mex. Bound. Surv., Zool., Fishes, 18.
Jordan, D. S. 1921 A, 278.
Jordan and Evermann 1898 A, 1247.

Neomænis hagari (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 48, pl. xiv, figs. 1, 4 (Lutianus).
Jordan, D. S. 1921 A, 278, pl. xlvi.
Miocene (Monterey); California.

SPARIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 91, 105.
Hay, O. P. 1902 A, 405.
Agassiz, L. 1844 D, 142 ("sparoïdes").
Allis, E. P. 1909 A, 201, 202.
Arldt, T. 1907 D, 682.
1923 A, 683 ("spariden").
Bassoli, G. G. 1906 A, 52, pl. ii (otoliths).
Bonaparte, C. L. 1833 B, 1198.
1838 B, 132.
Boulenger, G. A. 1904 A, 180.
1917 B, 329.
Bridge, T. W. 1896 A, 566.
Bronn, H. G. 1849 A, 780, seq. (Sparoidei).
Carus, V. 1875 A, 525 (Sparoidei).
Cockerell, T. D. A. 1913 B, 160.
Cuvier, G. 1805 A ("spares").
Dean, Gudger, Henn 1923 A, 418, 503, 650.
Dietz, P. A. 1914 A, 112.
Fitzinger, L. J. 1873 A, 31 (Spari).
Fowler, H. W. 1911 A, 181.
Fulton, T. W. 1906 A, 54.
Giebel, C. G. 1855 A, 101 (Sparoidei).
Gill, T. 1885 C, 218.
Goetsch, W. 1920 A, 439 (Sparus).
Goodrich, E. S. 1909 A, 428.
Günther, A. C. 1881 A, 688.
Hasse, C. 1873 A, 599 ("sparoiden").
Heckel, J. 1850 B, 146 ("spariden").
Hoernes, R. 1886 A, 536 (Sparoidei).
Huxley, T. H. 1859 H, 37.
Jordan, D. S. 1905 A, ii, 342, 593.
1907 B, 556.
1923 A, 197.
Klein, E. F. 1879 A, 69, 120 ("sparoiden").
Klein, E. F. 1884 A, 135, 206.
1885 A, 109, 133, 199, 225.
1886 A, 207, 239, 276.
Köstlin, O. 1844 A ("sparoiden").
Kner, R. 1862 A, 49 (Sparoidei).
Leunis and Ludwig 1883 A, 670.
M'Donnell, R. 1864 A, 168.
Meckel, J. F. 1825 A ("sparen").
Meek, A. 1916 A, 301.
Mummery, J. H. 1917 A, 251.
Owen, R. 1866 A.
Priem, F. 1906 B, 273, figs. 36-37.
1908 B, 82, 100 ("sparidés").
1914 B, 264, figs. 45-52 ("otolithus").
Regan, C. T. 1913 B, 124.
Schlosser, M. 1917 A, 142 ("spariden").
Schubert, R. J. 1906 A, 630.
Shepherd, C. E. 1910 A, 419.
1911 A, 450.
1916 A, 178, 204.
Siebenrock, F. 1901 A, 106.
Stannius, H. 1854 A, 4, seq. (Sparoidei).
Stephan, P. 1898 A, 359 ("sparides").
1900 A, 300, 314 ("sparidés").
Terra, P. 1911 A, 216.
Tomes, C. S. 1877 A, 45.
Wagner, R. 1843 A (Sparus).
Wallace, A. R. 1876 A, ii, 426.
Weiler, W. 1922 A, 76 (otoliths).
Whitehouse, R. H. 1910 B, 612, pl. xlix, fig. 20.
Woodward, A. S. 1901 A, 524.
Zittel and Koken 1911 A, 135.
Zittel and Schlosser 1923 A, 139.
Zittel and Woodward 1902 A, 105.

CROMMYODUS Cope. Type *Phacodus irregularis* Cope.

Hay, O. P. 1902 A, 405.
Fowler, H. W. 1911 A, 182.
Jordan, D. S. 1919 B, 356.

Crommyodus irregularis Cope.

Hay, O. P. 1902 A, 405.
Fowler, H. W. 1911 A, 182.
Kümmel, H. B. 1911 A, 183.
Woodward, A. S. 1901 A, 553.
Miocene (Kirkwood); New Jersey.

ATKINSONELLA Jordan. Type *A. strigilis* Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 41.

To what family this genus belongs is somewhat uncertain.

Atkinsonella strigilis Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert 1920 A, 41.
1921 A, 281, pl. v, fig. *b;* pl. xli, fig. *a.*
Miocene (Monterey); California.

RHYTHMIAS Jordan and Gilbert. Type *Rhythmias starrii* Jordan and Gilbert.

Jordan and Gilbert 1920 A, 27.
Jordan, D. S. 1921 A, 279.

Rhythmias starrii Jordan and Gilbert.

Jordan and Gilbert 1920 A, 28, pl. xvii.
Jordan, D. S. 1921 A, 279, pl. xliv.
1922 D, 273, fig. 6.
1925 B, 31.
1927 B, 93.
Miocene (Monterey); California.

ERIQUIUS Jordan. Type *E. plectrodes* Jordan.

Jordan, D. S. 1924 B, 44.

Eriquius plectrodes Jordan.

Jordan, D. S. 1924 B, 44, pl. H.
Jordan, D. S. 1925 B, 30, pl. xv.
Miocene (Monterey); California.

PLECTRITES Jordan. Type *Plectrites classeni* Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 29, 45.
1921 A, 280.

Plectrites classeni Jordan.

Jordan, D. S. 1920, in Jordan and Gilbert, 1920 A, 13, pl. xviii.
1921 A, 280, pl. xlv.
1925 B, 31, pl. xvi.
Miocene (Monterey); California.

SCIÆNIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 90, 105.
Hay, O. P. 1902 A, 405.
Agassiz, L. 1844 D, 142 ("scienoïdes").
Allis, E. P. 1909 A, 27 (Sciæna).
Arldt, T. 1907 D, 680.
1912 A, 760.
1923 A, 683.
Bassoli, G. G. 1906 A, 47, pl. ii (otoliths).
Bonaparte, C. L. 1833 B, 1198.
Boulenger, G. A. 1901 D, 384.
1904 D, 663, 755.
Bronn, H. G. 1848 B, 1123 (Sciaenoidei).
Carus, V. 1875 A, 530 (Sciænoidei).
Cockerell, T. D. A. 1913 B, 143, 162.
Cuvier, G. 1805 A ("scienes").
Dean, Gudger, Henn 1923 A, 364, 402, 595.
Dietz, P. A. 1914 A, 112.
Duméril, A. 1856 A, 288 ("scienoides").
Fitzinger, L. J. 1873 A, 31 (Sciænæ).
Giebel, C. G. 1855 A, 101 (Sciænoidei).
Gill, T. 1885 C, 213.
Goodrich, E. S. 1909 A, 431.
Günther, A. 1880 A, 426 (Sciæniformes, Sciænidæ).
1881 A, 689.
Heckel, J. 1850 B, 146 ("sciæniden").
Huxley, T. H. 1859 H, 37.
Jordan, D. S. 1905 A, ii, 353, 591.
1907 B, 567.
1923 A, 201.
Jordan and Gilbert 1882 A, 566.
Klein, E. F. 1879 A, 69 ("sciænoiden").
1884 A, 135, 184, 211.
1885 A, 109, 111, 135, 199.
1886 A, 210, 242, 278.
Kner, R. 1862 A, 52 (Sciænoidei).
Köstlin, O. 1844 A ("sciänoiden").
Leunis and Ludwig 1883 A, 676.
Meckel, J. F. 1825 A (Sciæna).
Meek, A. 1916 A, 298.
Owen, R. 1848 B, pl. i, fig. 2 (Pristopoma).
Priem, F. 1914 B, 267, figs. 53-64 ("sciænadarum"; "otolithus").
Regan, C. T. 1913 B, 122.
Richardson, J. 1836 A, 61 (Sciænoideæ).
Sauvage, H. E. 1877 A, 154.
Schubert, R. J. 1902 A, 301 ("sciæniden").
1906 A, 635.
Shepherd, C. E. 1910 B, 296.
1912 A, 450.
1916 A, 178.
Siebenrock, F. 1901 A, 107.
Smith, B. 1909 A, 275.
Stannius, H. 1854 A, 4, seq. (Sciænoidei).
Terra, P. 1911 A, 216.
Tomes, C. S. 1878 A, 38 (Sargus).
1900 A, 36 (Sargus).
Wagner, R. 1843 A (Sciæna).
Wallace, A. R. 1876 A, ii, 428.
Weiler, W. 1922 A, 75 (otoliths).
Woodward, A. S. 1901 A, 538.
Zittel and Koken 1911 A, 132.
Zittel and Schlosser 1923 A, 139.

POGONIAS Lacepède. Type *P. fasciatus* Lacepède = *Labrus cromis* Linn.

Hay, O. P. 1902 A, 405.
Arldt, T. 1923 A, 683.
Boulenger, G. A. 1904 D, 663, 751.
Dean, Gudger, Henn 1923 A, 595, 650.
Duméril, A. 1856 A, 292.
Giebel, C. G. 1855 A, 101.
Gill, T. 1885 B, 34.
Jordan and Evermann 1917 A, 61.
Leunis and Ludwig 1883 A, 676.
Sauvage, H. E. 1877 A, 156.
Smith, B. 1909 A, 275.

Pogonias cromis (Linn.).

Hay, O. P. 1902 A, 405.
Boulenger, G. A. 1904 D, 663 (P. chromis).
Günther, A. C. 1880 A, 427, fig. 187.
Jordan, D. S. 1905 A, ii, 357 (P. chromis).
Smith, B. 1909 A, 277, figs. 3, 4, 7-9.
Recent; Long Island to Mexico: Pleistocene (Ashley River); South Carolina.

Pogonias multidentatus Cope.

Hay, O. P. 1902 A, 406.
Clark and Miller 1912 A, 167, 168.
Hussakof, L. 1908 A, 88, pl. v, fig. 13.
Smith, B. 1909 A, 275, figs. 10-13.
Woodward, A. S. 1901 A, 538.
Miocene; Virginia.

Pogonias sp. indet.

Hay, O. P. 1902 A, 406. Eocene?; South Carolina.

OTOLITHIDÆ Jordan.

Jordan, D. S. 1921 A, 282.
Arldt, T. 1923 A, 683 (Otolithus).
Boulenger, G. A. 1901 D, 384 (Otolithus).
Jordan, D. S. 1923 A, 202.
Shepherd, C. E. 1910 B, 296, pl. i, fig. 17 (Otolithus).

LOMPOQUIA Jordan and Gilbert. Type *L. retropes* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 49.
Jordan, D. S. 1921 A, 282.

Lompoquia retropes Jordan and Gilbert.

Jordan and Gilbert 1919 A, 49, pl. xxiv, fig. 1.
Jordan, D. S. 1921 A, 281, pl. xlvii.
Jordan, D. S. 1922 D, 274, fig. 7.
1924 B, 47, pl. K.
1925 B, 32.
Jordan and Gilbert 1920 A, 30, pl. xix.
Miocene (Monterey); California.

ARISTOSCION Jordan. Type *A. emprepes* Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 282.

Aristoscion emprepes Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 282, 283, pl. vi, fig. *b*; pl. xlviii (A. eprepes).
Miocene (Monterey); California.

IOSCION Jordan. Type *I. morgani* Jordan.

Jordan, D. S. 1921 A, 283.

Ioscion morgani Jordan.

Jordan, D. S. 1921 A, 283, pl. viii, fig. *a*; pl. xlix, fig. *a*.
Miocene (Monterey); California.

Suborder LABRIFORMES Regan.

Unless otherwise indicated the authors, as below quoted, use for this group the name Pharyngognathi.

Regan, C. T. 1913 B, 112, 132 (Labriformes, as "division").
Hay, O. P. 1902 A, 400.
Arldt, T. 1907 D, 672.
Bronn, H. G. 1849 A, 780, seq.
Carus, V. 1875 A, 546.
Cockerell, T. D. A. 1913 B, 166.
Cope, E. D. 1871 T, 456.
Fowler, H. W. 1911 A, 183.
Gill, T. 1873 F, 8 (Labroidea).
Greene, J. R. 1861 A, 228.
Günther, A. C. 1881 A, 691.
Jordan, D. S. 1905 A, ii, 384, 586.
1907 B, 595, 768.
Jordan, D. S. 1923 A, 221.
Klein, E. F. 1879 A, 69, 72.
1884 A, 130, 135 (Pharyngognathi).
1885 A, 222, 234.
1886 A, 213, 274, 285 (Pharyngognathi).
Kner, R. 1861 A, 247.
Leunis and Ludwig 1883 A, 703.
Lönnberg, E. 1901 A.
Müller, J. 1846 C, 131, 155, 199.
Owen, R. 1866 A, 10, 11.
Parker and Haswell 1897 A, 206.
Stannius, H. 1854 A, 5, seq.
Stephan, P. 1900 A, 314 ("pharyngognathes").
Zittel and Schlosser 1923 A, 142 (Pharyngognathi).
Zittel and Woodward 1902 A, 102.

LABRIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 93, 111.
Hay, O. P. 1902 A, 400.
Agassiz, L. 1844 D, 142 ("labroïdes").
Allis, E. P. 1909 A, 201.
Arldt, T. 1907 D, 661.
1923 A, 688 ("labriden").
Baudelot, E. 1873 A, 101 ("labroides").
Bonaparte, C. L. 1838 B, 132.
Boulenger, G. A. 1904 A, 181.
1904 D, 673, 744.
Bridge, T. W. 1896 A, 574.
Bronn, H. G. 1849 A, 780, seq.
Carus, V. 1875 A, 547 (Labroidei).
Cockerell, T. D. A. 1913 B, 166.
Cope, E. D. 1871 T, 459.
Creaser, C. W. 1926 A, 53.
Cuvier, G. 1805 A ("labres").
1815 A, 110 ("labres").
Dean, Gudger, Henn 1923 A, 686.
Dietz, P. A. 1914 A, 113, figs. 7, 9.
Fitzinger, L. J. 1873 A, 30 (Labri).
Fowler, H. W. 1911 A, 183.
Frost, G. A. 1928 A, 452, pl. xvii.
Fryd, C. 1901 A, 25.
Fulton, T. W. 1906 A, 61, pls. ii B, v.
Gill, T. 1885 B, 35.
1885 C, 237.
1905 A, 656 ("wrasses").
Goodrich, E. S. 1909 A, 446.
Günther, A. C. 1881 A, 691.
Haseman, J. D. 1912 A, 98.
Heckel, J. 1850 B, 146 ("labriden").
1856 A, 268 (Labroidei).
Hoernes, R. 1886 A, 534.
Jordan, D. S. 1903 A, 137 ("labroids").
1905 A, ii, 385, 577.
1907 B, 590.
1923 A, 221.
Jordan and Gilbert 1882 A, 597.
Klein, E. F. 1879 A, 66, 101.
1884 A, 130, 140, 222, 248.
1885 A, 108, 113, 141, 172, 199, 208, 235.
1886 A, 206, 207, 214, 250, 251, 285.
Kner, R. 1861 B, 140 (Labroidei).
Köstlin, O. 1844 A ("labroiden").
Leriche, M. 1900 A, 173.
Leunis and Ludwig 1883 A, 704.
Meckel, J. F. 1825 A (Labrus).
Meek, A. 1916 A, 306.
Müller, J. 1845 A, 102, 136 (Labroidei).
Mummery, J. H. 1917 A, 251, 260.
Priem, F. 1907 C, 82, 100, 115 ("labrides").
Pouchet, G. 1878 A, 41, 145, pl. v (Labrus).
Regan, C. T. 1913 B, 132, 134.
Richardson, J. 1836 A, 106 (Labroideæ).
Schlosser, M. 1917 A, 142 ("labriden").
Schmalhausen, J. J. 1916 C, 213.
Schubert, R. J. 1906 A, 652.
Shepherd, C. E. 1910 A, 419.
1911 A, 453.
Siebenrock, C. H. 1901 A, 107.
Stannius, H. 1854 A, 5 seq. (Labroidei).
Terra, P. 1911 A, 215.
Wallace, A. R. 1876 A, II, 437.
Whitehouse, R. H. 1910 B, 613, pl. xlix, fig. 21.
Woodward, A. S. 1901 A, 539.
Zittel and Koken 1911 A, 133.
Zittel and Schlosser 1923 A, 142.
Zittel and Woodward 1902 A, 103.

PROTAUTOGA Leidy. Type *P. conidens* Leidy.

Hay, O. P. 1902 A, 401.

Protautoga conidens Leidy.

Hay, O. P. 1902 A, 401.
Clark and Miller 1912 A, 167, 168 (P. conideus).
Woodward, A. S. 1901 A, 553.
Miocene, Virginia.

PHARYNGODOPILIDÆ Cocchi.

Cocchi, I. 1864 A, 329.
Hay, O. P. 1902 A, 400 (Labridæ, in part).
Jordan, D. S. 1923 A, 221 (Pharyngopilidæ).
Sauvage, H. E. 1875 B, 615 (Pharyngodopilidæ, Phyllodidæ).

NUMMOPALATUS Rouault. Type *N. edwardsius* Roualt.

Hay, O. P. 1902 A, 401.
Arldt, T. 1923 A, 688.
Gervais, F. L. 1857 Mém. Acad. Sci. Montpellier, III, 515 (Labrodon).
Jordan, D. S. 1919 B, 284 (Syn. of Labrodon Gervais).
Leriche, M. 1900 A, 174, 176.
Priem, F. 1901 A, 497.
1908 B, 101 (Labrodon).
Woodward, A. S. 1901 A, 541 (Syn. of Labrodon).
Zittel and Schlosser 1923 A, 142, fig. 245.
Zittel and Woodward 1902 A, 103.

Nummopalatus carolinensis (Leidy).

Hay, O. P. 1902 A, 401.
Woodward, A. S. 1901 A, 543 (Labrodon).
Tertiary (Phosphate beds); South Carolina.

PHYLLODUS Agassiz. Type *P. toliapicus* Agassiz.

Hay, O. P. 1902 A, 401.
Arldt, T. 1923 A, 688.
Boulenger, G. A. 1904 D, 674.
Bronn, H. G. 1849 A, 668.
Eastman, C. R. 1901 B, 112.
Fowler, H. W. 1911 A, 184.
Gervais, P. 1852 A, explan. pl. lxvii, lxviii.
1859 A, 516, pls. lxvii, lxviii.
Giebel, C. G. 1855 A, 106, pl. xlv, fig. 9.
Jordan, D. S. 1905 A, ii, 396.
Leriche, M. 1900 A, 174.
1905 A, 165.

Leriche, M. 1906 C, 419.
Priem, F. 1901 A, 494.
1908 B, 100, 115, fig. 58.
Sauvage, H. E. 1875 B, 615 (Phyllodus, Paraphyllodus).
Woodward, A. S. 1901 A, 546.
1922 C, 105, fig. 116.
Zittel and Koken 1911 A, 133.
Zittel and Schlosser 1923 A, 142, fig. 244.
Zittel and Woodward 1902 A, 103.

Phyllodus curvidens Marsh.

Hay, O. P. 1902 A, 401.
Eastman, C. R. 1901 B, 111, 113.
Fowler, H. W. 1911 A, 184.
Kümmel, H. B. 1911 A, 184.
Woodward, A. S. 1901 A, 550.
Miocene (Kirkwood); New Jersey.

Phyllodus elegans Marsh.

Hay, O. P. 1902 A, 401.
Eastman, C. R. 1901 B, 112.
Fowler, H. W. 1911 A, 184, fig. 108.
Kümmel, H. B. 1911 A, 168.
Woodward, A. S. 1901 A, 550.
Upper Cretaceous (Manasquan); New Jersey.

Phyllodus hipparionyx Eastman.

Eastman, C. R. 1901 B, 113.
Hay, O. P. 1902 A, 401.
Woodward, A. S. 1901 A, 617.
Eocene; Virginia.

Suborder EPHIPPIFORMES Jordan.

Jordan, D. S. 1923 A, 205.
Cockerell, T. D. A. 1913 B, 167.
Stannius, H. 1854 A (Squammipennes).
Steinmann, G. 1927 A, 450 ("squamipennes").

EPHIPPIDÆ Gill.

Gill, T. 1872 C, 8.
Hay, O. P. 1902 A, 400 (Chætodontidæ).
Boulenger, G. A. 1904 D, 668 (Chætodontidæ).
Cockerell, T. D. A. 1913 B, 167.
Dean, Gudger, Henn 1923 A, 513, 650 (Ephippus).
Frost, G. A. 1927 A, 304, pl. v.
Gill, T. 1885 C, 203.
Jordan, D. S. 1905 A, ii, 400 (Ephippidæ, Ilarchidæ).
1907 B, 611 (Ephippidæ, Ilarchidæ).
1923 A, 205.
Jordan and Evermann 1898 A, 1666.
Jordan and Gilbert 1882 A, 612.
Owen, R. 1848 B, 57, 147 (Ephippus).
Regan, C. T. 1913 B, 127.
Steinmann, G. 1927 A, 51 ("chaetodonten").
Woodward, A. S. 1901 A, 559 (Ephippus).

CHÆTODIPTERUS Lacepède. Type *C. plumieri* Lacepède.

Hay, O. P. 1902 A, 400.
Arldt, T. 1923 A, 685 (Ephippus).
Dean, Gudger, Henn 1923 A, 415.
Duméril, A. 1856 A, 333 (Ephippus).
Gill, T. 1885 B, 34.
1885 C, 209.
Goodrich, E. S. 1909 A, 434, fig. 442 (Ephippus).
Jordan, D. S. 1903 A, 137.
1905 A, ii, 400, 562.
1907 B, 611.
Jordan and Evermann 1917 A, 64 (Chætodipterus); 105 (Ephippus).
Jordan and Gilbert 1882 A, 613.
Klein, E. F. 1885 A, 225 (Ephippus).
Kner, R. 1861 B, 129 (Ephippus).
Köstlin, O. 1844 A (Ephippus).
Owen, R. 1848 B, 57, 147 (Ephippus).
Priem, F. 1908 B, 116, fig. 59 (Ephippus).
Regan, C. T. 1913 B, 127 (Ephippus).
Stannius, H. 1854 A (Ephippus).
Steinmann, G. 1927 A, 51.
Stephan, P. 1900 A, 300 (Epihippus).

Chætodipterus faber (Brouss).

Hay, O. P. 1902 A, 400.
1923 A, 381.
Jordan, D. S. 1905 A, ii, 400.
Meek, A. 1916 A, 305 (Ephippus).
Recent; Cape Cod to Rio de Janeiro: Pleistocene; Florida.

PLATACIDÆ Jordan.

Jordan, D. S. 1905 A, ii, 401, 586.
Jordan, D. S. 1923 A, 204.

PLATAX Cuvier. Type *Chætodon teira* Bloch.

Cuvier, G. 1817, Règne Anim., II, 334.
Hay, O. P. 1902 A, 403.
Agassiz, L. 1843 B (1842), iv, 244.
Arldt, T. 1923 A, 685.
Bronn, H. G. 1848 B, 991.
Duméril, A. 1856 A, 351.
Eastman, C. R. 1901 B, 111.
Jordan, D. S. 1903 A, 137.
1905 A, ii, 401, 586.
Jordan and Evermann 1917 A, 105 (In Ephippidæ).
Klein, E. F. 1879 A, 94.
1884 A, 215.
1885 A, 112, 138, 171, 231.
1886 A, 206, 245.
Köstlin, O. 1844 A.
Leriche, M. 1906 C, 420.
Lütken, C. F. 1881 A, 118.
Newton, E. T. 1882 A, 122, pl. xix, figs. 1-3.
1891 A.
Owen, R. 1866 A, 39, 612.
Stannius, H. 1854 A, 4.

Woodward, A. S. 1901 A, 426, 432 (In Carangidæ).
Zittel and Koken 1911 A, 137.
Zittel and Schlosser 1923 A, 145.

Platax sp. indet.

Hay, O. P. 1902 A, 403. Pliocene?; South Carolina.

Order GOBIOMORPHI, new name.

Jordan, D. S. 1923 A, 224 (Gobioidea).
Regan, C. T. 1911 H, 731 (Gobioidea).

Suborder Gobiiformes Günther.

Günther, A. C. 1880 A, 483.
Arldt, T. 1923 A, 693 ("gobiiformen").
Boulenger, G. A. 1904 A, 183.
1904 D, 688.
Dean, Gudger, Henn 1923 A, 657.
Dietz, P. A. 1914 A, 129.
Goodrich, E. S. 1909 A, 447.
Günther, A. C. 1881 A, 690.
Jordan, D. S. 1905 A, ii, 459 (Gobioidei).
1907 B, 670.
1923 A, 224 (Gobioidea).
Regan, C. T. 1909 B, 81 (Gobioidei).
1911 H, 729 (Gobioidea).
1912 B, 850 (Gobioidei).
1913 B, 111 (Gobioidea).
Woodward, A. S. 1901 A, 587.
Zittel and Schlosser 1923 A, 143.

Superfamily GOBIOIDÆ, new form.

Dean, Gudger, Henn 1923 A, 590 (Gobioidea).
Gill, T. 1872 C, 6 (Gobioidea).
Gill, T. 1885 C, 255 (Gobioidea).
Jordan, D. S. 1907 B.

GOBIIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 93, 110 (Gobidæ).
Allis, E. P. 1909 A, 214.
Arldt, T. 1907 D, 656.
Bassoli, G. G. 1906 A, 54, pl. ii (Gobius, otoliths).
Boulenger, G. A. 1904 D, 689.
1917 B, 329.
Carus, V. 1875 A, 539 (Gobioidei).
Cockerell, T. D. A. 1913 B, 169.
Dean, Gudger, Henn 1923 A, 682.
Fiebiger, J. 1905 A, 140 (Gobii).
Gill, T. 1872 C, 7.
1885 C, 255.
Goodrich, E. S. 1909 A, 448 (Gobidæ).
Günther, A. C. 1861 A, 1.
1880 A, 485.
1881 A, 690.
Jordan, D. S. 1905 A, ii, 458.
1907 B, 670.
1923 A, 224.
Jordan and Evermann 1898 A, 2188.
Jordan and Gilbert 1882 A, 629.
Klein, E. F. 1879 A, 96, 115.
1884 A, 135, 147, 181, 216.
1885 A, 118, 175, 199, 235.
1886 A, 218, 254, 281.
Meek, A. 1916 A, 341.
Müller, J. 1846 C, 158 (Gobioidei).
Noorden, C. 1883 A, 235 (Gobius).
Norman, E. W. 1926 A, 407 (Gobius).
Owen, R. 1845 B, 102 ("gobioids").
Pouchet, G. 1875 A, 293, 297 (Gobius).
1878 A, 40, 55, figs. (Gobius).
Regan, C. T. 1903 B, 460.
1911 H, 731.
Sagemehl, M. 1884 A, 4.
Schlosser, M. 1917 A, 140, 143 ("gobiiden").
Shepherd, C. E. 1910 B, 295, pl. i, fig. 5 (Gobius).
1916 A, 204.
Siebenrock, F. 1901 A.
Solger, B. 1880 A, 376, 388 (Gobius).
Stannius, H. 1854 A, 4, seq. (Gobioidei).
Starks, E. C. 1911 A, 747.
Terra, P. 1911 A, 217.
Trouessart, E. L. 1906 A, 212.
Woodward, A. S. 1901 A, 587.
Zittel and Koken 1911 A, 134.
Zittel and Schlosser 1923 A, 143.

Aboma antiqua Jordan and Gilbert.*

Jordan and Gilbert 1919 A, 56, pl. xxix, fig. 1.
Duncker, G. 1923 A.
Jordan, D. S. 1926 B, 223 (Gobius?).
1927 A, 191.
1927 B, 97.

Order COTTOMORPHI, new name.

Hay, O. P. 1902 A, 406 (Pareiopliteæ).
Allis, E. P. 1907 A, 568 ("mail-cheeked fishes," Loricati).
1909 A, 1-144 (Loricati, Craniomi).
1922 B, 194, 207 ("mail-cheeked fishes").
Arldt, T. 1923 A, 694 ("scleroparen").
Belling, D. E. 1912 A, 46 (Scleroparei).
Berg, L. S. 1906 A, 906 (Cataphracti).
1907 A, 1 (Cataphracti).
Boulenger, G. A. 1904 D, 692 (Scleroparei).
Cockerell, T. D. A. 1913 B, 170 (Scleroparei).
Eastman, C. R. 1911 C, 385 (Scleroparei).
Goetsch, W. 1920 A, 481 (Cataphracti).
Gutberlet, J. E. 1915 A, 1 (Loricati).
Jordan, D. S. 1903 A, 137 (Pareioplitæ).
1905 A, ii, 426, 585 (Pareioplitæ).
1907 B, 637 (Pareioplitæ); 769 (Scleroparei).
1923 A, 208 (Cataphracti).

* This name was applied, through an error, to Steindachner's *Gobius oblongus*, an Austrian fossil fish.

Kindred, J. E. 1919 A, 57 (Loricati).
Kner, R. 1862 A, 54 (Cataphracti).
Plate, L. 1926 A, 44 (Cataphracta).
Regan, C. T. 1913 A, 169, 170 (Scleroparei).
1913 B, 111 (Scleroparei).
Stannius, H. 1849 A, 540 ("cataphracten").
1854 A, 4, seq. (Cataphracti).
Steinmann, G. 1927 A, 80 (Cataphracti).
Whitehouse, R. H. 1910 B, 616 (Scleroparei).

Suborder SCORPÆNIFORMES Woodward.

Woodward, A. S. 1901 A, 576.
Jordan, D. S. 1923 A, 208.
Regan, C. T. 1912 B, 850 (Scorpænoidei).
1913 A, 169, 170 (Scorpænoidei).
Zittel and Schlosser 1923 A, 143.

SCORPÆNOIDÆ, new form.

Hay, O. P. 1902 A, 406 (Scorpænoidea).
Allis, E. P. 1919 E, 366 ("mail-cheeked fishes").
Goodrich, E. S. 1909 A, 449 (Scorpæniformes).
Jordan, D. S. 1923 A, 208 (Scorpæniformes).
Regan, C. T. 1912 B, 850 (Scorpænoidei).
1913 A, 170, 174 (Scorpæniformes).

SCORPÆNIDÆ Swainson.

Swainson, W. 1838 A, ii, 53, 56, 180.
Hay, O. P. 1902 A, 406.
Abel, O. 1906 C, 83, 84.
Allis, E. P. 1907 A, 570 (Scorpæna).
1909 A, 214, pls. i, ii (Scorpæna).
Arldt, T. 1907 D, 681.
1923 A, 694 ("scorpæniden").
Boulenger, G. A. 1904 D, 694.
Carus, V. 1875 A, 528 (Scorpænoidei).
Cockerell, T. D. A 1913 B, 170.
Cuvier, G. 1815 A, 110 ("scorpènes").
Dean, Gudger, Henn 1923 A, 700.
Dietz, P. A. 1914 A, 134, fig. 20 (Scorpæna).
Fryd, C. 1901 A, 20.
Fulton, T. W. 1906 A, 54.
Gill, T. 1885 B, 35.
1885 C, 248.
Goodrich, E. S. 1909 A, 449.
Günther, A. C. 1881 A, 689.
Heckel, J. 1850 B, 146 ("scorpæniden").
Heilprin, A. 1887 A, 296.
Jordan, D. S. 1905 A, ii, 426, 591.
1907 B, 637.
1923 A, 208.
Jordan and Evermann 1898 A, 1758.
Jordan and Gilbert 1882 A, 650.
Kaup, J. J. 1873 A, 73-94.
Kesteven, H. L. 1926 B, 231.
Klein, E. F. 1884 A, 144, 206, 245 (Scorpæna).
1885 A, 109, 166, 201.
1886 A, 240, 277, fig. 17 (Scorpænina).
Leunis and Ludwig 1883 A, 672.
Mackintosh, N. A. 1923 A, 501.
Meckel, J. F. 1825 A (Scorpæna).
Meek, A. 1916 A, 345.
Norman, E. W. 1926 A, 412 (Sebastes).
Regan, C. T. 1913 A, 170, 172, 174.
Ridewood, W. G. 1904 A, 58.
Sauvage, H. E. 1873 A, 726.
Shepherd, C. E. 1913 A, 386.
Starks, E. C. 1916 A, 733, fig. 1 (Scorpæna).
Whitehouse, R. H. 1910 B, 616.
Woodward, A. S. 1901 A, 577.
Zittel and Koken 1911 A, 140.
Zittel and Schlosser 1923 A, 143.

Sebastavus vertebralis Jordan and Gilbert.

Jordan and Gilbert 1919 A, 50, pl. xxxi, fig. 1.
Duncker, G. 1923 A.
Jordan, D. S. 1926 B, 223 ("Sebastavus").
1927 A, 191.
1927 B, 97.

Through an error, this name was applied to Steindachner's *Gobius elongatus*, an Austrian fossil fish.

SEBASTODES Gill. Type *Sebastes paucispinis* Ayres.

Hay, O. P. 1902 A, 406.
Allis, E. P. 1909 A, 214.
Arldt, T. 1923 A, 694.
Ayres, W. O. 1863 A, 391, 393, 398.
Cockerell, T. D. A. 1913 B, 170.
Cockerell and Moore 1910 B, 93.
Cramer, F. 1895 A, 573, pls. lvii-lxx.
Dean, Gudger, Henn 1923 A, 593, 658.
Gill, T. 1865 C, 145.
Huntsman, A. G. 1919 A, 592.
Jordan, D. S. 1905 A, ii, 428, 591.
1907 B, 640.
1919 C, 336.
1921 A, 286.
Jordan and C. Gilbert 1882 A, 652.
Jordan and J. Z. Gilbert 1920 A, 31.
Meek, A. 1916 A, 345.

Sebastodes rosæ Eigenmann.

Hay, O. P. 1902 A, 406.
Cramer, F. 1895 A, 589 (This genus?).
Hay, O. P. 1927 D, 199.
Jordan, D. S. 1907 A, 134.
1907 B, 649.
Jordan and J. Z. Gilbert 1919 A, 63.
Woodward, A. S. 1901 A, 579.
Tertiary (Pliocene?); California.

SEBASTINUS Jordan. Type *Rixator ineziæ* Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 287.
1925 B, 36.

Sebastinus ineziæ Jordan.

Jordan, D. S., in Jordan and Gilbert 1920 A, 34, pl. xxii, fig. 2 (Rixator).

Jordan, D. S., in Jordan and Gilbert 1921 A, 287, pl. liv.
1922 D, 674, fig. 8.
1925 B, 37, pl. xix.
Miocene (Monterey); California.

SEBASTOËSSUS Jordan. Type *S. apostates* Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 285.
1925 B, 36.

Sebastoëssus apostates Jordan.

Jordan, D. S. 1920 C, 571.
1921 A, 285, pl. xiv, fig. *a*; pl. liii.
1925 B, 36.
Miocene (Monterey); California.

Sebastoëssus haroldi Jordan.

Jordan, D. S. 1925 B, 37, pl. xix.
Miocene (Monterey); California.

Sebastoëssus sp. indet.

Jordan, D. S. 1921 A, 288. Miocene (Monterey); California.

RIXATOR Jordan and Gilbert. Type *Rixator porteousi* Jord. and Gilb.

Jordan and Gilbert 1920 A, 31.
Jordan, D. S. 1921 A, 285, 287.

Rixator porteousi Jordan and Gilbert.

Jordan and Gilbert 1920 A, 33, pls. xxi, xxii, xxiii.

Jordan, D. S. 1920 A, 22, fig. 5.
1921 A, 284, 286, pl. lii.
1925 B, 38.
Jordan and Gilbert 1919 A, pl. xxii (Ectasis proriger).
Miocene (Monterey); California.

RHOMARCHUS Jordan and Gilbert. Type *R. ensiger* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 51.

Rhomarchus ensiger Jordan and Gilbert.

Jordan and Gilbert 1919 A, 51, pl. xxxi, fig. 5.

Jordan, D. S. 1921 A, 288, pl. lv.
Miocene (Monterey); California.

HEXAGRAMMOIDÆ, new form.

Jordan, D. S. 1923 A, 210 (Hexagrammiformes).

ANOPLOPOMIDÆ Gill.

Gill, T. 1885 C, 253.
Boulenger, G. A. 1904 D, 697 (Comephoridæ, in part).
Dean, Gudger, Henn 1923 A, 658 (Anoploma).
Jordan, D. S. 1905 A, ii, 438.
1907 B, 649.

Jordan, D. S. 1921 A, 284.
1923 A, 210.
Jordan and Evermann 1898 A, 186 (Anoplomatidæ).
Regan, C. T. 1913 A, 171, 173, 177 (Anoplomatidæ).

EOSCORPIUS Jordan and Gilbert. Type *E. primævus* Jord. and Gilbert.

Jordan and Gilbert 1919 A, 53.

Eoscorpius primævus Jordan and Gilbert.

Jordan and Gilbert 1919 A, 53, pl. xxx.

Jordan, D. S. 1921 A, 284.
Miocene (Monterey); California.

HEXAGRAMMIDÆ Gill.

Gill, T. 1889 A, 583, 587.
Arldt, T. 1923 A, 694 ("hexagrammiden").
Boulenger, G. A. 1904 A, 184.
1904 D, 694, 696.
Dean, Gudger, Henn 1923 A, 658.
Goodrich, E. S. 1909 A, 453.
Gutberlet, J. E. 1915 A, 27

Jordan, D. S. 1905 A, ii, 439.
1923 A, 211.
Jordan and Evermann 1898 A, 1863.
Jordan and Gilbert 1882 A, 640 (Chirinæ).
Meek, A. 1916 A, 347.
Regan, C. T. 1913 A, 171, 173, 177.

ZEMIAGRAMMUS Jordan. Type *Z. isistius* Jordan.

Jordan, D. S. 1921 A, 289.

Zemiagrammus isistius Jordan.

Jordan, D. S. 1921 A, 289, pl. x, fig. *a* (Zemiagrammus); pl. l (Zemmiagrammus).
1925 B, 35 (Syn.? of Aræosteus rothi).
Miocene (Monterey); California.

ACHRESTOGRAMMUS Jordan. Type *Hexagrammos achrestus* Jordan and Gilbert.

Jordan, D. S. 1921 A, 289.

Achrestogrammus achrestus (Jordan and Gilbert).

Jordan and Gilbert 1919 A, 52, pl. xxiv, fig. 2 Hexagrammos).

Jordan, D. S. 1921 A, 289.
1922 D, 274, fig. 8 (Hexagrammos).
Jordan and Gilbert 1920 A, 36, pl. xix (Hexagrammos).
Miocene (Monterey); California.

OPHIODONTIDÆ Jordan and Gilbert.

Jordan and Gilbert, J. Z. 1920 A, 36.
Jordan, D. S. 1921 A, 290.
1923 A, 211.

Jordan and Evermann 1898 A, 1864 (Ophiodontinæ).
Jordan and C. H. Gilbert 1882 A, 640 (Ophiodontinæ).

OPHIODON Girard. Type *O. elongatus* Girard.

Girard, C. 1854, Proc. Acad. Nat. Sci. Phila., 133.
Boulenger, G. A. 1904 D, 692, 696, fig. 422.
Gill, T. 1885 C, 253.
Goodrich, E. S. 1909 A, 453.
Günther, A. C. 1860 A, 93.
Jordan, D. S. 1905 A, ii, 4.
1907 B, 651.
1921 A, 290.

Jordan and Evermann 1898 A, 1875.
Jordan and Gilbert 1882 A, 646.

Ophiodon ozymandias Jordan.

Jordan, D. S. 1921 A, 290.
Jordan and Gilbert 1920 A, 36 (Ozymandias gilberti; not of 1919).
Miocene (Monterey); California.

COTTOIDÆ, new form.

Hay, O. P. 1902 A, 406 (Cottoidea).
Gill, T. 1872 C, 6 (Cottoidea).
1873 F, 8 (Cottoidea, Cyclopteroidea).

Gill, T. 1890 A, 363 (Cottoidea).
Jordan, D. S. 1923 A, 211 (Cottiformes).
Regan, C. T. 1913 A, 171, 179 (Cottiformes).

COTTIDÆ Swainson.

Swainson, W. 1838 A, ii, 181, 270.
Hay, O. P. 1902 A, 406.
Abel, O. 1906 C, 83, 84.
Agassiz, L. 1844 D, 142 ("cottoides").
Allis, E. P. 1909 A, 213.
Arldt, T. 1907 D, 648.
1912 A, 760.
1923 A, 695 ("cottiden").
Berg, L. S. 1906 A, 906.
1907 A, 37.
Boulenger, G. A. 1904 D, 697.
Bridge, T. W. 1896 A, 571.
Cockerell, T. D. A. 1913 B, 171.
Cuvier, G. 1815 A, .110 ("cottes").
Dean, Gudger, Henn 1923 A, 374, 658.
Fitzinger, L. J. 1873 A, 40 (Cotti).
Gill, T. 1885 B, 34.
1885 C, 249.
1905 D, 348.
1908 A, 101 (Cottinæ).
Girard, C. F. 1851 A.
1852 A, 3 ("cottoïdes").
Goetsch, W. 1920 A, 481.
Goodrich, E. S. 1909 A, 103, 453, fig. 64.
Günther, A. C. 1881 A, 690.
Heilprin, A. 1887 A, 68.
Hubbs, C. L. 1926 A, 64 ("cottoids").
Jordan, D. S. 1905 A, ii, 441, 565.
1907 B, 652.
1923 A, 213.
Jordan and Evermann 1898 A, 1879.
Jordan and C. Gilbert 1882 A, 682.
Jordan and J. Z. Gilbert 1919 A, 54.
Klein, E. F. 1885 A, 166 (Cottina).
1886 A, 240, 274, 277 (Cottina).
Leunis and Ludwig 1883 A, 687.
Meek, A. 1916 A, 349, 350, 374.
Priem, F. 1914 B, 245, fig. 1 ("cottidarum").
Putnam, F. W. 1874 A, 337.
Regan, C. T. 1911 H, 731.
1913 A, 171, 173, 180.
Richardson, J. 1836 A, 36 (Cottoideæ).
Schlosser, M. 1917 A, 140, 143 ("cottiden").
Starks, E. C. 1911 A, 747.
Woodward, A. S. 1901 A, 580.
Zittel and Koken 1911 A, 140.
Zittel and Schlosser 1923 A, 144.

COTTUS Linn. Type *C. gobio* Linn.

Linnæus, C. 1758 A, 264.
Hay, O. P. 1902 A, 406.
Agassiz, A. 1877 A, 122.
Allis, E. P. 1905 A, 465, figs. 31-35.
1907 A, 570.
1909 A, 213, pl. iv.
1922 A, 153.
Arldt, T. 1923 A, 695.
Baudelot, E. 1873 A, 94.
Beer, G. R. 1924 C, 319, figs. 30, 31.
Belling, D. E. 1912 A, 55.
Berg, L. S. 1906 A, 909.
1907 A, 37.
Born, G. 1827 A, 188.
Bronn, H. G. 1848 A, 341.
1849 A, 680.
Carlsson, A. 1894 A, 217, 228.
Cuvier, G. 1805 A.
Dall and Harris 1892 A, 282.
Dean, Gudger, Henn 1923 A, 676.
Derjugin, K. 1909 A.
1910 A, 597.
Dietz, P. A. 1914 A, 135, figs. 21, 29.
1921 A, 443.
Fryd, C. 1901 A, 21.
Fulton, T. W. 1906 A, 55, pl. iii.
Gill, T. 1861 D, 40.
1908 A, 102, fig. 26.
Girard, C. F. 1851 A.
1851 B, 183.
1852 A, 3, 15.
Goetsch, W. 1920 A, 13, 15, 492, pls. i, ii.
Jordan, D. S. 1905 A, ii, 444, 565.
1907 B, 655.
Jordan and Evermann 1917 A, 12.
Jordan and Gilbert 1882 A, 700.
Klein, E. F. 1879 A, 86, 117.
1884 A, 208.
1885 A, 111, 201.
1886 A, 240, 274, 277.
Kner, R. 1861 A, 762.
Köstlin, O. 1844 A.
Leriche, M. 1905 B, 677.
Meek, A. 1916 A, 352.
Noorden, C. 1883 A, 235.
Owen, R. 1868 A, 874.
Ryder, J. 1887 A, 354.
Shann, E. W. 1919 A, 532, 560.
Stannius, H. 1842 C, 98.
1854 A, 66.
Stephan, P. 1900 A, 301.
Thilo, O. 1900 B, 20.
Totten, A. K. 1914 A, 252.
Woodward, A. S. 1901 A, 585.

Cottus beldingii Eigenmann and Eigenmann.

Eigenmann and Eigenmann 1891, Amer. Naturalist, xxv, 1132.
Hay, O. P. 1927 D, 152.
Jordan, D. S. 1924 A, 1, pl. i (C. beldingi).
Jordan and Evermann 1898 A, 1958.
Recent: Lakes Tahoe and Donner, California: Pleistocene (Lahontan); Nevada.

Cottus cryptotremus Cope.

Hay, O. P. 1902 A, 406.
1927 D, 245, 265, 268.
Leriche, M. 1905 B, 678.
Woodward, A. S. 1901 A, 585.
Pleistocene (Idaho); Idaho.

Cottus divaricatus Cope.

Hay, O. P. 1902 A, 406.
Dall and Harris 1892 A, 282.
Hay, O. P. 1927 D, 245.
Hussakof, L. 1908 A, 68, fig. 36*a*.
Leriche, M. 1905 B, 678.
Woodward, A. S. 1901 A, 585.
Pleistocene (Idaho); Oregon.

Cottus hypoceras Cope.

Hay, O. P. 1902 A, 406.
Dall and Harris 1892 A, 282.
Hay, O. P. 1927 D, 245.
Hussakof, L. 1908 A, 69, fig. 36*e*.
Leriche, M. 1905 B, 678.
Woodward, A. S. 1901 A, 585.
Pleistocene (Idaho); Oregon.

Cottus pontifex Cope.

Hay, O. P. 1902 A, 406.
Dall and Harris 1892 A, 282.
Hay, O. P. 1927 D, 245.
Hussakof, L. 1908 A, 69, fig. 36*d*.
Leriche, M. 1905 B, 678.
Woodward, A. S. 1901 A, 585.
Pleistocene (Idaho); Oregon.

HAYIA Jordan and Gilbert. Type *H. daulica* Jordan and Gilbert.

Jordan and Gilbert 1919 A, 55.
The family position of this genus is uncertain.

Hayia daulica Jordan and Gilbert.

Jordan and Gilbert 1919 A, 55, pl. xxiii, fig. 2.
Jordan, D. S. 1921 A, 290.
Miocene (Monterey); California.

ARTEDIELLUS Jordan. Type *Cottus uncinatus* Reinh.

Hay, O. P. 1902 A, 407.

Artediellus atlanticus Jord. and Evermann.

Hay, O. P. 1902 A, 407.
Ami, H. M. 1897 A, 22 (Cottus uncinatus).
Ami, H. M. 1901 C, 53 ("Cottus").
Coleman, A. P. 1901 C, 224 (Cottus uncinatus).
Dawson, J. W. 1857 A, 415 ("Cottus").
1863 F, 917 ("Cottus").
1894 C, 203, 265 (Cottus uncinatus).
Hay, O. P. 1923 A, 287.

Johnson, W. A. 1917 A, 25 ("Cottus").
Lambe, L. M. 1904 C, 39, 44 (A. uncinatus).
Leriche, M. 1905 B, 677 (Cottus uncinatus).
Meek, A. 1916 A, 354.
Woodward, A. S. 1901 A, 585 (Cottus uncinatus).
Recent; Labrador to Cape Cod: Pleistocene; Ontario.

URANIDEA DeKay. Type *U. quiescens* DeKay.

DeKay, J. A. 1842, New York Fauna, Fishes, 61.
Girard, C. 1851 A, 9.
Jordan, D. S. 1905 A, ii, 444.
Jordan and Evermann 1898 A, 1963.
Jordan and Gilbert 1882 A, 693.

Uranidea? sp. indet.

Dall, W. H. 1889, in Diller, J. S. 1889 A, 418 ("Uranidea." This genus?).
Turner, H. W. 1899 A, 563 (This genus?).
Neocene; California.

Suborder TRIGLIFORMES Jordan.

Jordan, D. S. 1923 A, 216.

CYCLOPTEROIDÆ, new form.

Hay, O. P. 1902 A, 407 (Cyclopteroidea).
Allis, E. P. 1909 A, 195 (Cyclopteroidea).
Gill, T. 1873 F, 8 (Cyclopteroidea).
1890 A, 361-370 (Cyclopteroidea).
Jordan, D. S. 1923 A, 215 (Cyclopteriformes).

CYCLOPTERIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 96.
Hay, O. P. 1902 A, 407.
Arldt, T. 1923 A, 695 ("cyclopteriden").
Bonaparte, C. L. 1838 B, 132.
Boulenger, G. A. 1904 D, 698, 737.
Bridge, T. W. 1896 A, 577.
Cuvier G. 1815 A, 110 ("cycloptères").
Dean, Gudger, Henn 1923 A, 658.
Dietz, P. A. 1914 A, 135.
1921 A, 456.
Fitzinger, L. J. 1873 A, 41 (Cyclopteri).
Gill, T. 1885 B, 34.
1885 C, 250.
1890 A, 366.
Goodrich, E. S. 1909 A, 454.
Guitel, F. 1896 A, 345 ("cycloptères").
Günther, A. C. 1881 A, 690 (Discoboli).
Jordan, D. S. 1905 A, ii, 453, 565.
1907 B, 664.
1923 A, 215.
Jordan and Gilbert 1882 A, 744.
Klein, E. F. 1884 A, 135, 201 (Discoboli).
Meek, A. 1916 A, 356.
Müller, J. 1846 C, 158 (Discoboli).
Putnam, F. W. 1874 A, 337.
Regan, C. T. 1913 A, 172, 173, 182.
Schmidt, B. 1913 A, 317 (Cyclopterinæ).
Shepherd, C. E. 1914 A, 271.
Stannius, H. 1854 A, 4, seq. (Cyclopteri).
Starks, E. C. 1911 A, 748 (Cyclopteryidæ).

CYCLOPTERUS Linn. Type *C. lumpus* Linn.

Hay, O. P. 1902 A, 407.
Allis, E. P. 1909 A, 195, 199.
Baudelot, E. 1873 A, 93.
Boulenger, G. A. 1904 D, 699, 737, fig. 425.
Braus, H. 1906 A, 173.
Cuvier, G. 1805 A.
Dean, Gudger, Henn 1923 A, 676.
Derjugin, K. M. 1909 A.
1910 A, 588.
Dietz, P. A. 1914 A, 137, figs. 25, 31.
1921 A, 435, figs. 4, 11.
Fiebiger, J. 1905 A, 142.
Gill, T. 1890 A, 361.
1907 B, 175.
Goetsch, W. 1920 A, 38, 500.
Goette, A. 1879 A, 126.
Goodrich, E. S. 1906 A, 347.
Guitel, F. 1896 A, 345.
Huxley, T. H. 1859 H, 38.
Jordan and Evermann 1917 A, 12.
Jordan and Gilbert 1882 A, 746.
Klaatsch, H. 1890 A, 175.
Klein, E. F. 1884 A, 135, 201, 216.
1885 A, 199, 204, 235.
1886 A, 281.
Kner, R. 1861 A, 767.
Köstlin, O. 1844 A.
Leunis and Ludwig 1883 A, 691.
Meckel, J. F. 1825 A.
Norman, E. W. 1926 A, 402, figs. 42, 50.
Owen, R. 1848 B, 68.
1866 A, 180.
Pehrson, T. 1922 A, 13, 20.
Putnam, F. W. 1874 A, 335.
Sagemehl, M. 1884 A, 4.
Schmidt, B. 1913 A, 313.
Stannius, H. 1854 A, 95.
Stephan, P. 1900 A, 385, 388.
Thilo, O. 1900 A, 19.
Uhlmann, E. 1921 A, 275.
Ussow, S. 1900 A, 185, pl. iv.
Wagner, R. 1843 A.
Wallace, A. R. 1876 A, ii, 430.

Cyclopterus lumpus Linn.

Hay, O. P. 1902 A, 407.
Ami, H. M. 1901 C, 54.
Billings, E. 1856 A, 337, 345 (Cyclopteris).
Bridge, T. W. 1896 A, 577.
Coleman, A. P. 1901 C, 224.
Dawson, J. W. 1857 A, 408, 415.
1863 F, 917.
1872 B, 403.
1872 C, 57, 99.
1894 C, 203.

Dietz, P. A. 1921 A, 438, figs. 1-3.
Fiebiger, J. 1905 A, 141.
Fulton, T. W. 1906 A, 59, pls. iii, B, v.
Gill, T. 1885 C, 251, fig. 142.
1890 A, 368.
1907 B, 175, figs. 32, 33, 36, 43-47.
Goetsch, W. 1920 A, 500.
Guitel, F. 1896 A, 345, pls. vi-x; text-figs. 1-8.
Hase, A. 1911 A, 217.
Haug, E. 1911 A, 1876.
Hay, O. P. 1923 A, 23, 287.
Jordan, D. S. 1905 A, ii, 453.
1907 B, 664.
Jordan and Gilbert 1882 A, 747.
Lambe, L. M. 1904 C, 39, 44.
Meek, A. 1916 A, 356, 357, 358.
Rathke, H. 1822 A, 498, pl. vi.
Richardson, J. 1836 A, 260.
Schmidt, B. 1913 A, 313.
Shepherd, C. E. 1914 A, 271, fig. 3.
Stromer, E. 1925 B, 363.
Uhlmann, E. 1921 A, 275, pls. xvi, xvii; text-figs. 1-45.
Recent; North Atlantic, both coasts: Pleistocene (Leda clay); Ontario.

TRIGLOIDÆ Kaup.

Kaup, J. J. 1873 A, 79 (as suborder).
Gill, T. 1889 A, 589 (Craniomi).
Jordan, D. S. 1905 A, ii, 456 (Craniomi).
1923 A, 216 (Trigliformes).

TRIGLIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 90, 102.
Allis, E. P. 1909 A, 17, 113.
Bassoli, G. G. 1906 A, 53, pl. ii (otoliths).
Baudelot, E. 1873 A, 94 (Trigla).
Bonaparte, C. L. 1838 B, 132.
Boulenger, G. A. 1904 D, 700.
Cockerell, T. D. A. 1913 B, 171.
Dean, Gudger, Henn 1923 A, 705.
Eudes-Deslongchamps, E. 1842 D, 45, pl. v ("trigles").
Fitzinger, L. J. 1873 A, 40 (Triglæ).
Geoffroy-St. Hilaire, E. F. 1824 A, 137 ("trigles").
Gill, T. 1872 C, 6.
1885 C, 252.
1889 A, 568, 590.
Goetsch, W. 1920 A, 481 ("trigladen").
Goode and Bean 1895 A, 462.
Goodrich, E. S. 1909 A, 450, 517.
Günther, A. C. 1860 A, 87.
Hamburger, R. 1904 A, 83 (Trigla).
Hertwig, O. 1881 A, 19.
Jordan, D. S. 1905 A, ii, 456.
1923 A, 27.
Jordan and Evermann 1898 A, 2147.
Jordan and Gilbert 1882 A, 731.
Kaup, J. J. 1873 A, 71.
Kesteven, H. L. 1926 B, 231.
Klein, E. F. 1884 A, 135, 181, 208.
1885 A, 111, 134, 166, 201.
1886 A, 209, 240, 277.
Kner, R. 1862 A, 57 ("trigloiden").
Meek, A. 1916 A, 362.
Owen, R. 1866 A, 101, fig. 82 (Trigla).
Sauvage, H. E. 1873 A, 723.
Schubert, R. J. 1906 A, 641 (Cataphracti).
Shepherd, C. E. 1912 A, 453.
Siebenrock, F. 1901 A, 106.
Stephan, P. 1900 A, 291 ("triglidés").
Supino, F. 1904 A, 629.
Terra, P. 1911 A, 218.
Wallace, A. R. 1876 A, ii, 427.
Weiler, W. 1922 A, 77 (otoliths).
Williamson, C. 1894 A, 322.
Woodward, A. S. 1901 A, 585.
Zittel and Koken 1911 A, 140.
Zittel and Schlosser 1923 A, 143.

TRIGLA Linnæus. Type *T. lyra* Linnæus.

Linnæus, C. 1758 A, 300.
Allis, E. P. 1909 A, 215, pl. v.
Bassoli, G. G. 1906 A, 53, pl. ii (otoliths).
Beer, G. R. 1926 A, 339, figs. 107, 114.
Belling, D. E. 1912 A, 46.
Boulenger, G. A. 1904 D, 701.
Bridge, T. W. 1896 A, 571.
Dean, Gudger, Henn 1923 A, 705.
Dietz, P. A. 1914 A, 135, figs. 22, 27.
Fryd, C. 1901 A, 22, fig.
Fulton, T. W. 1906 A, 55, pl. i, B.
Goetsch, W. 1920 A, 488, pl. xxii.
Goode and Bean 1895 A, 463.
Goodrich, E. S. 1909 A, 450, 517.
Hamburger, R. 1904 A, 88, 120, pl. ii.
Jordan, D. S. 1905 A, ii, 456.
Jordan and Evermann 1898 A, 2176.
Kindred, J. E. 1919 A, 57.
Kingsley, J. S. 1925A, 113, 237, figs. 119, 250
Klein, E. F. 1884 A, 183, 199, 251, pl. ii.
1885 A.
Köstlin, O. 1844 A.
Kolzoff, N. K. 1896 A, 516, fig. 4.
Leunis and Ludwig 1883 A, 688.
Pouchet, G. 1878 A, 141 ("trigle").
Shann, E. W. 1919 A, 532.
Stannius, H. 1849 A, 536.
1854 A, 67, 93.
Thilo, O. 1896 B, 97.
Weiler, W. 1922 A, 77, pl. i (otoliths).
Whitehouse, R. H. 1910 C, 139, fig. 3.
Williamson, C. 1894 A, 322, pls. xiii-xv.
Woodward, A. S. 1901 A, 586.

Trigla? sp. indet.

Dana, J. D. 1849 A, 722, pl. xvi (This genus?).
Quaternary; Oregon.
Sauvage, H. E. 1873 A, 723.

Order EMBIOTOCOMORPHI, new name.

Jordan, D. S. 1923 A, 217 (Holconoti).

EMBIOTOCIDÆ Günther.

Günther, A. C. 1862 A, 244.
Agassiz, L. 1853 B, 383 (Embiotocoidæ).
Cockerell, T. D. A. 1913 B, 164, pl. xxxviii, figs. 37, 38.
Eigenmann, C. H. 1894 A, 381-478, with 24 pls.
Frost, G. A. 1928 A, 452, pl. xvii (Embiotoca).
Jordan, D. S. 1923 A, 217.
Jordan and Evermann 1898 A, 1493.
Jordan and Gilbert 1882 A, 585.

LIROSCELES Jordan. Type *L. elegans* Jordan.

Jordan, D. S. 1925 B, 32, pl. xvi.

Lirosceles elegans Jordan.

Jordan, D. S. 1925 B, 32, pl. xvi.
Miocene (Monterey); California.

ERISCELES Jordan. Type *E. pristinus* Jordan.

Jordan, D. S. 1925 B, 33.

Erisceles pristinus Jordan.

Jordan, D. S. 1925 B, 33, pl. xvii.
Miocene (Monterey); California.

DASCELES Jordan. Type *D. dassurus* Jordan.

Jordan, D. S. 1925 B, 34.

Dasceles dassurus Jordan.

Jordan, D. S. 1925 B, 34, pl. xviii.
Miocene (Monterey); California.

Order GOBIESOCOMORPHI, new name.

Boulenger, G. A. 1904 D, 708 (Xenoptera).
Gill, T. 1872 C, 13 (Gobiesociformes).
1885 C, 267 (Xenopterygii).
Jordan, D. S. 1905 A, ii, 529 (Xenopterygii).
1907 B, 737 (Xenopterygii).
1921 A, 291 (Xenopterygii).
Jordan, D. S. 1923 A, 228 (Xenopterygia).
Jordan and Evermann 1898 A, 2326 (Xenopterygii).
Regan, C. T. 1909 B, 86 (Xenopteri).
1913 B, 111 (Xenopterygii).

GOBIESOCIDÆ Günther.

Günther, A. C. 1861 A, 489.
Allis, E. P. 1909 A, 214.
Arldt, T. 1907 D, 656.
Boulenger, G. A. 1904 D, 707.
Cope, E. D. 1871 T, 459.
Dean, Gudger, Henn 1923 A, 659.
Gill, T. 1872 C, 5.
1885 C, 267.
Goodrich, E. S. 1909 A, 456.
Jordan, D. S. 1923 A, 238.
Jordan and Evermann 1898 A, 2326.
Jordan and Gilbert 1882 A, 747.

BULBICEPS Jordan. Type *B. raninus* Jordan.

Jordan, D. S. 1919 A, 12.
Hubbs, C. L. 1924 A, 178.

Bulbiceps raninus Jordan.

Jordan, D. S. 1919 A, 5, 12, pl. vi.
1921 A, 291.
Miocene? (Soledad); California.

Order DIODONTOMORPHI, new name.

This order is usually called Plectognathi or Plectognatha by the authors cited.
Hay, O. P. 1902 A, 407.
Abel, O. 1919 A, 157.
Arldt, T. 1907 D, 674.
1923 A, 700 ("plectognathen").
Bonaparte, C. L. 1831 A, 97.
1833 B, 1202.
Boulenger, G. A. 1901 D, 500.
1904 A, 162, 189.
1904 D, 721, 751.
Bridge, T. W. 1896 A, 578.
Bronn, H. G. 1849 A, 780, seq.
Carus, V. 1875 A, 582.
Cope, E. D. 1871 T, 456.
Cunningham, J. T. 1912 A, 248, 271.
Dean, Gudger, Henn 1923 A, 695.
Dietz, P. A. 1917 A, 86.
Eastman, C. R. 1911 C, 390.
Eichwald, E. 1832 A, 887 ("plectognathen").
Eimer, G. H. T. 1901 A, 61, 107.
Fitzinger, L. J. 1873 A, 46.
Goetsch, W. 1920 A, 19, 39, 450 ("plectognathen").
Goodrich, E. S. 1909 A, 435.
Gill, T. 1885 C, 286.
1905 A, 659, 660.
Greene, J. R. 1861 A, 228.

Günther, A. C. 1881 A, 688, 694.
Heckel, J. 1850 B, 146 ("plectognathen").
Hoernes, R. 1886 A, 527.
Hoeven, J. 1822 A.
Hollard, H. 1864 B, 248 ("plectognathes").
Huxley, T. H. 1859 H, 37.
1863 F, 427.
Jaekel, O. 1911 A, 98.
1919 A, 109.
Jordan, D. S. 1905 A, ii, 411, 586.
1907 B, 622, 768.
1923 A, 239.
Jordan and Gilbert 1882 A, 852.
Klaatsch, H. 1890 A, 175 ("plectognathen").
Klein, E. F. 1879 A, 66, 72.
1881 A, 349.
1884 A, 150, 190, 236, 251.
1885 A, 129, 158, 218, 252.
1886 A, 230, 269, 296.
Kner, R. 1860 B, 822.
Köstlin, O. 1844 A ("plectognathen").
Latreille, P. A. 1825 A, 114.
Leunis and Ludwig 1883 A, 763.
Lönnberg, E. 1901 A.
1902 A.
Meek, A. 1916 A, 336.
Parker and Haswell 1897 A, 207.
Rauther, M. 1913 A, 1104.
Regan, C. T. 1902 A, 281.
1903 A, 285.
1909 B, 81, 86.
1912 B, 843, 852.
1913 B, 111.
Rosén, N. 1913 A, 1 ("plectognaths").
1913 B, 1.
1916 B, 1 ("plectognaths").
Sagemehl, M. 1884 A, 100 ("plectognathiden").
Schlosser, M. 1917 A, 142 ("gymnodonten").
Schmalhausen, J. J. 1916 C, 212.
Siebenrock, F. 1901 A, 107.
Stannius, H. 1854 A, 6, seq.
Starks, E. C. 1916 A, 32.
Stephan, P. 1898 A, 358 ("plectognathes").
1900 A, 314.
Terra, P. 1911 A, 207.
Tretjakoff, D. 1925 A, 379 ("plectognathen").
1926 A, 619 ("plectognathen").
Wallace, A. R. 1876 A, ii, 457.
Whitehouse, R. H. 1910 B, 620.
Woodward, A. S. 1898 B, 122.
Zittel and Koken 1911 A, 142.
Zittel and Schlosser 1923 A, 140.
Zittel and Woodward 1902 A, 109.

Suborder BALISTIFORMES, new name.

Unless otherwise indicated the authors, as cited, use the name Sclerodermi.
Hay, O. P. 1902 A, 407.
Abel, O. 1912 F, 199.
Agassiz, L. 1835 B, 331 (Sclerodermes).
1835 H, 231 (Sclerodermata).
1844 D, 142 (Sclerodermes).
1845 C, 325 (Sclerodermata).
Arldt, T. 1923 A, 700 ("sclerodermen").
Baraldi, G. 1877 A, 44.
Bonaparte, C. L. 1831 A, 97, 120.
Boulenger, G. A. 1904 D, 722.
Bridge, T. W. 1896 A, 578.
Bronn, H. G. 1848 B, 1124 (Sclerodermes).
Carus, V. 1875 A, 583.
Cockerell, T. D. A. 1913 B, 168.
Cunningham, J. T. 1912 A, 271.
Cuvier, G. 1814 A, 76 ("sclerodermes").
Dean, Gudger, Henn 1923 A, 402, 661, 662.
Duméril, A. 1856 A, 173 ("sclerodermes").
Fitzinger, L. J. 1873 A, 46 (Sclerodermata).
Giebel, C. G. 1855 A, 110.
Gill, T. 1873 F, 6 (Balistoidea).
1885 C, 287.
1888 B, 830 ("scleroderms").
Goetsch, W. 1920 A, 31 ("sclerodermen").
Goodrich, E. S. 1909 A, 436.
Günther, A. 1881 A, 694.
Hoernes, R. 1886 A, 527.
Jordan, D. S. 1905 A, ii, 412, 591.
1907 B, 622, 768.
1923 A, 239.
Klaatsch, H. 1890 A, 175, 187 ("sclerodermen")
Köstlin, O. 1844 A ("sclerodermen").
Latreille, P. A. 1825 A, 115 (Scleroderma).
Leunis and Ludwig 1883 A, 763.
Lönnberg, E. 1901 A.
1902 A.
Meek, A. 1916 A, 336.
Rauther, M. 1913 A, 1104.
Regan, C. T. 1903 A, 286.
1909 B, 81 (Balistoidei).
1912 B, 852.
Rosén, N. 1913 A, 19.
Schlosser, M. 1917 A, 142.
Siebenrock, F. 1901 A, 107.
Steinmann, G. 1927 A, 22 ("sclerodermen").
Wallace, A. R. 1876 A, II, 457.
Whitehouse, R. H. 1910 B, 620, pl. l. fig. 33.
Zittel and Koken 1911 A, 142 (Sclerodermidæ).
Zittel and Schlosser 1923 A, 140.
Zittel and Woodward 1902 A, 110 (Sclerodermidæ).

BALISTIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 97, 120.
Hay, O. P. 1902 A, 407.
Abel, O. 1922 F, 78.
Baudelot, E. 1873 A, 112 ("balistes").
Boulenger, G. A. 1904 A, 189.
1904 D, 723, 732.
Cockerell, T. D. A. 1913 B, 168.
Cope, E. D. 1871 T, 458.
Cuvier, G. 1805 A ("balistes").
Cuvier, G. 1815 A, 120 ("balistes").
Dareste, C. 1872 A, 1527 ("balistes").
1872 B, 68.
Dean, Gudger, Henn 1923 A, 670.
Dietz, P. A. 1914 A, 158, fig. 45 (Balistes).
Duméril, A. 1856 A, 173 ("balistides").
Fitzinger, L. J. 1873 A, 47 (Balistæ).
Geoffroy St. Hilaire, E. F. 1807 B, 423 ("balistes").

Gill, T. 1885 B, 35.
1885 C, 287.
1888 B, 828.
Goetsch, W. 1920 A, 34, 449, pl. i (Balistes)
Goodrich, E. S. 1909 A, 437.
Hamburger, R. 1904 A, 80 (Balistes).
Jordan, D. S. 1905 A, ii, 412, 558.
1907 B, 623.
1923 A, 239.
Jordan and Gilbert 1882 A, 854.
Klein, E. F. 1881 A, 330, 349 (Balistina).
1884 A (Balistina).
1885 A (Balistina).
1886 A (Balistina).
Köstlin, O. 1844 A (Balistes).
Leriche, M. 1906 C, 273.
Lönnberg, E. 1902 A (Balistini).
Mayer, A. F. 1862 A, 109 (Balistes).
Meckel, J. F. 1825 A ("ballisten").
Meek, A. 1916 A, 336.
Müller, J. 1845 A, 102, 137 (Balistini).
Owen, R. 1845 B, 82, pl. xl (Balistes).
1866 A, 197 (Balistes).
Rauther, M. 1919 A, 214, 4 figs.
Regan, C. T. 1903 A, 288.
Rosén, N. 1913 B, 1, text-fig. G (Balistes).
1916 B, 3, 12.
Sagemehl, M. 1884 A, 4 (Balistes).
Shepherd, C. E. 1913 A, 388.
Steinmann, G. 1927 A, 19, pl. i; text-figs. 7-9 (Balisti).
Stephan, P. 1900 A, 379, 402 ("balistidés").
Thilo, O. 1896 A, 291, pls. vi, vii ("balisten").
1898 B, 89 ("balistiden").
Tretjakoff, D. 1925 A, 381, 386 (Balistes).
1926 A, 619, figs. 1, 2 (Balistes).
Wagner, R. 1843 A (Balistes).
Williamson, W. C. 1851 A, 657, pl. xxviii, fig. 13.
Woodward, A. S. 1901 A, 565.

Grypodon Hay. Type *Ancistrodon texanus* Dames.

Hay, O. P. 1902 A, 408.
Arldt, T. 1923 A, 700 (Ancistrodon).
Jordan, D. S. 1920 C, 486.
Leriche, M. 1905 A, 168 (Ancistrodon).
1906 C, 263, 411 (Ancistrodon).
1911 A, 164 (Ancistrodon).
Priem, F. 1907 B, 415 (Ancistrodon).
Priem, F. 1908 B, 60, 64, 98, fig. 26 (Ancistrodon).
1912 B, 271 (Ancistrodon).
Stromer, E. 1905 C, 187 (Ancistrodon).

Grypodon texanus (Dames).

Hay, O. P. 1902 A, 408.
Cretaceous; Texas.

Suborder Diodontiformes, new name.

Unless otherwise indicated the authors, as cited use the name Gymnodontes.

Hay, O. P. 1902 A, 408 (Diodontoidea).
Abel, O. 1912 F, 199.
Agassiz, L. 1833 A, 480 (Gymnodontæ).
1835 B, 331.
1835 H, 231 (Gymnodontæ).
1844 D, 142.
1845 C, 325 ("gymnodonts").
Arldt, T. 1907 D, 656 (Gymnodontidæ).
1923 A, 700 ("gymnodonten").
Bonaparte, C. L. 1831 A, 97, 120.
1833 B, 1202.
1838 B, 131.
1840 A, 47.
Born, G. 1827 A, 185 ("gymnodonten").
Boulenger, G. A. 1901 D, 501.
1904 D, 725, 741.
Bridge, T. W. 1896 A, 581.
Cunningham, J. T. 1912 A, 272.
Dean, Gudger, Henn 1923 A, 662.
Duméril, A. 1856 A, 157 ("gymnognathes").
Eastman, C. R. 1911 C, 390.
Fitzinger, L. J. 1873 A, 47.
Giebel, C. G. 1855 A, 110.
Gill, T. 1885 C, 289.
Goetsch, W. 1920 A, 19 ("gymnodonten").
Goodrich, E. S. 1909 A, 439.
Günther, A. 1881 A, 694.
Hoernes, R. 1886 A, 527.
Jaeckel, O. 1911 A, 99.
Jordan, D. S. 1905 A, ii, 418, 573.
1907 B, 629, 768.
Jordan, D. S. 1923 A, 240.
Jordan and Evermann 1898 A, 1726.
Klaatsch, H. 1890 A, 175 ("gymnodonten").
Klein, E. F. 1879 A, 72.
1885 A, 255.
1886 A, 231.
Kner, R. 1860 B, 824 ("gymnodonten").
Köstlin, O. 1844 A ("gymnodonten").
Latreille, P. A. 1825 A, 115 (Gymnodonta).
Leunis and Ludwig 1883 A, 765.
Lönnberg, E. 1901 A.
1902 A.
Müller, J. 1845 A, 102, 137.
Owen, R. 1839 H, 347 ("gymnodontes").
1840 H, 74 ("gymnodontes").
1845 B, 77 ("gymnodonts").
Rauther, M. 1913 A, 1104.
Regan, C. T. 1903 A, 286, 291.
1912 B, 852 (Tetrodontoidei).
Rosén, N. 1913 A, 19.
Semon, R. 1901 B, 133 ("gymnodonten").
Siebenrock, F. 1901 A, 107.
Stannius, H. 1854 A, 94 (Gymnodontes).
Thilo, O. 1896 A, 333 ("gymnodonten").
Tomes, C. S. 1878 A, 41 ("gymnodonts").
Tretjakoff, D. 1926 A, 619 (Gymnodontes).
Wallace, A. R. 1876 A, ii, 457.
Zittel and Koken 1911 A, 142 (Gymnodontidæ).
Zittel and Schlosser 1923 A, 141 (Gymnodontidæ).
Zittel and Woodward 1902 A, 110 (Gymnodontidæ).

DIODONTIDÆ Richardson.

Richardson, J. 1856 A, 314.
Hay, O. P. 1902 A, 408.
Boulenger, G. A. 1904 D, 726.
Cope, E. D. 1871 T, 438.
Cunningham, J. T. 1912 A, 248.
Cuvier, G. 1801 A, 25 ("diodons").
1803 A, 166 ("diodons").
1815 A, 120 ("diodons").
Dean, Gudger, Henn 1923 A, 402, 662.
Eastman, C. R. 1911 C, 390.
Fitzinger, L. J. 1873 A, 48 (Diodontes).
Gill, T. 1885 B, 35.
1885 C, 290.
Goodrich, E. S. 1909 A, 440.
Jordan, D. S. 1905 A, ii, 422.
1907 B, 633.
1923 A, 241.
Jordan and Gilbert 1882 A, 859 (Diodontinæ).
Meek, A. 1916 A, 337.
Owen, R. 1866 A (Diodon).
Regan, C. T. 1903 A, 292.
1912 B, 852.
Rosén, N. 1913 A, 19.
1913 B, 24.
1916 B, 10, 20.
Shufeldt, R. W. 1917 A, 1.
Woodward, A. S. 1901 A, 570 (Gymnodontidæ).

DIODON Linn. Type *D. hystrix* Linn.

Hay, O. P. 1902 A, 408.
Abel, O. 1908 E, 415 (Cheirodus).
Agassiz, L. 1835 H, 231.
Allis, E. P. 1909 A, 63.
Arldt, T. 1923 A, 700.
Baudelot, E. 1873 A, 94.
Boulenger, G. A. 1904 D, 726, 738.
Bridge, T. W. 1896 A, 582, pl. xxiii.
Dean, Gudger, Henn 1923 A, 677.
Duméril, A. 1856 A, 159.
Eimer, G. H. T. 1901 A, 41, 61.
Goetsch, W. 1920 A, 25, pl. i.
Goette, A. 1879 A, 127.
Goodrich, E. S. 1909 A, 440, 442, figs. 452-455.
Hyrtl, C. J. 1862 A, 106.
Jordan, D. S. 1905 A, ii, 423, 566.
Jordan and Evermann 1917 A, 15.
Jordan and Gilbert 1882 A, 862.
Klein, E. F. 1884 A, 132, 135, 240, 242, 249, pl. iii.
1885 A, 220.
1886 A, 272, 296, 299, fig. 18.
Kner, R. 1860 B, 824.
Köstlin, O. 1844 A.
Leriche, M. 1905 A, 212.
1906 C, 414.
Leunis and Ludwig 1883 A, 766.
Meckel, J. F. 1825 A.
Meek, A. 1916 A, 337, 339.
Owen, R. 1840 H, 74.
1848 B, 113.
Owen, R. 1868 A, 877.
Pasquale, M. 1905 A, 71.
Regan, C. T. 1903 A, 291, fig. 57.
Ridewood, W. G. 1896 A, 387, 390.
Rosén, N. 1913 B, 24.
Schlosser, M. 1917 A, 144.
Shufeldt, R. W. 1917 A, 1.
Stannius, H. 1849 A, 539.
1854 A, 6, seq.
Stephan, P. 1900 A, 387.
Thilo, O. 1896 B, 104.
Tretjakoff, D. 1925 A, 381.
1926 A, 639, fig. 10.
Woodward, A. S. 1901 A, 571.
1922 C, 105, fig. 117.

Diodon vetus Leidy.

Hay, O. P. 1902 A, 408.
Pasquale, M. 1905 A, 71, figs. 1-3.
Woodward, A. S. 1901 A, 573.
Phosphate beds; South Carolina: Miocene; North Carolina: Pleistocene?; Florida (Cat. No. 4110. Wagner Free Inst., from Peace Creek, Florida).

Diodon sp. indet.

Hay, O. P. 1923 A, 381. Pleistocene (Early); Florida.
Tuomey, M. 1848 A, 159, 160. Eocene (Santee beds); South Carolina.

ZAPRORIDÆ Jordan.

Jordan, D. S. 1896, Proc. Calif. Acad. Sci., vi, 202.
1923 A, 230.
Jordan and Evermann 1898 A, 2848.
Jordan and Gilbert 1920 A, 25.
A family of uncertain position.

ARÆOSTEUS Jordan and Gilbert. Type *Arœosteus rothi* Jordan and Gilbert.

Jordan and Gilbert 1920 A, 25.

Arœosteus rothi Jordan and Gilbert.

Jordan and Gilbert 1920 A, 25, pl. xiv.
Jordan, D. S. 1921 A, 291, pl. xlix, fig. *b*.
1925 B, 35 (Zemiagrammus isistius a syn.?)
Miocene (Monterey); California.

OTOLITHS.

Hay, O. P. 1902 A, 408.
Bassoli, G. G. 1906 A, 36, pls. i, ii ("otoliti").
Eastman, C. R. 1901 B, 113 ("otolites").
Frost, G. A. 1925 A, 152, 553.
Frost, G. A. 1926 A, 465.
1927 A, 298.
1928 A, 451.
1928 B, 328.

Fryd, C. 1901 A, 7 (Otolithes).
Ihring, H. 1891 C, 23 (Otholithi).
Posthumus, O. 1923 A, 231.
Priem, F. 1908 B ("otolithes").
1914 B, 244-278, figs.
Schubert, R. J. 1902 A (Otolithes).
1905 A, 613 (Otolithes).
Shepherd, C. E. 1910 B.
1916 A.
Woodward, A. S. 1901 A, 629.

Class AMPHIBIA Linnæus.

Linnæus, C. 1858 A, i, 194.
Hay, O. P. 1902 A, 409 (Batrachia).
Abel, O. 1910 B, 185 ("amphibien").
1912 F, 300, 414.
1919 A, 220.
1920 A, 345.
1921 A, 143, 247 ("amphibien").
Adams, C. C. 1902 A, 116.
Adams, L. A. 1919 A, 83, 139, 144.
Adloff, P. 1904 B, 54 ("amphibien").
1907 A, 531 ("amphibien").
1910 B, 241 ("amphibien").
Adolphi, H. 1896 A, 115 ("amphibien").
Agar, W. E. 1907 A, 625.
Allis, E. P. 1898 A, 457.
1907 A, 570 ("amphibien").
1913 A, 324.
1915 A.
1918 A, 244.
1919 B, 80.
1923 A, 48.
1923 B, 132.
Altmann, F. 1925 A, 88 ("amphibien").
Anderson, R. J. 1912 A, 917.
1912 D, 250.
Anonymous, 1912 A, 519.
Anthony, R. 1912 A ("batraciens").
Anthony and Vallois 1914 A, 218 ("batraciens").
Arldt, T. 1907 C, 678 ("amphibien").
1907 D, 637.
1907 E, 204 ("amphibien").
1909 B, 354 ("amphibien").
1916 A, 94 ("lurche").
Arthaber, G. 1910 A, 552 ("amphibien").
Ayers, H. 1906 A, 77.
Baird, S. F. 1876 A, cc, 308 ("batrachia").
Baraldi, G. *passim* ("amfibi").
Bardeleben, K. 1896 A, 114 ("amphibier").
1901 A ("amphibien").
1903 A, 23 ("amphibien").
1906 A, 140 ("amphibien").
1907 A, 35 ("amphibien").
1907 B, 154 ("amphibien").
Bardenfleth, K. S. 1913 A, 69 ("amphibians").
Barrell, J. 1915 B, 391, 409 ("amphibians").
Baur, G. 1887 H, 47 ("amphibien").
1893 D, 116 ("amphibien").
1897 D, 42.
1897 E, 170.
1897 F, 372.
Beede, J. W. 1922 A, 680.
Beer, G. R. 1926 A, 307.
Bender, O. 1907 A, 38 ("amphibien").
1910 A, 123 ("amphibien").
1913 A, 285 ("amphibien").
Bergmann, C. 1841 A, 204 ("amphibien").
Beyer, H. 1907 A, 265, 267 ("amphibien").
1909 A, 32 ("amphibien").
Bischoff, T. L. W. 1840 B, 144 ("amphibies").
Blainville, H. M. D. 1835 A, 272.
Boas, J. E. V. 1914 B, 548, 550 ("amphibien").
1914 C, 239 ("amphibien").
Bogoljubsky, S. 1914 A, 659.
Böker, H. 1927 A, 21, 50, fig. 13 ("uramphib").
Bolk, L. 1913 A, 113 ("amphibien").
Bonaparte, C. L. 1832 A, 318.
1833 B, 1186 (Amphibia=Reptilia+Batrachia).
Boulenger, G. A. 1901 B, 401.
1902 F, 381.
1917 C, 458 ("batraciens").
Brandt, J. F. 1865 A, 220.
Branson, E. B. 1918 A, 90 ("amphibians").
Brauns, D. 1890 A, 147, 148 ("amphibien").
Braus, H. 1906 A, ("amphibien").
1906 B, 549 ("amphibien").
Bridge, T. W. 1878 A, 721, 724.
Broili, F. 1904 A, 107 ("amphibien").
Bronn, H. G. 1849 A, 780, seq. (Batrachii).
Broom, R. 1890 A, 410 ("amphibians").
1899 A, 749 ("amphibians").
1903 I, 554.
1904 B, 94.
1908 A, 1047.
1908 E, 114 ("amphibians").
1909 B, 165.
1911 A, 920 (Batrachia).
1912 A, 625 ("amphibien").
1926 A, 257 ("amphibians").
Bruch, C. 1862 A, 77 ("batrachien").
Burckhardt, R. 1903 A, 78 ("amphibien").
1906 A, 159 ("sauropsiden").
Cahall, W. C. 1890 A, 232 ("amphibians").
Carter, J. T. 1905 A, 129.
Cartier, O. 1875 A, 73 ("amphibien").
Carus, V. 1875 A, 454.
Carus and Engelmann 1861 A, 1052-1065, 1562. 1673, 1703.
Case, E. C. 1905 E, 180 ("amphibiens").
1907 E, 157.
1911 B, 85.
1912 A, 200.
1915 A, 96.
1924 B, 6.
Chaine, J. 1918 A, 734 ("batraciens").
Cleland, J. 1887 A, 392.
Cope, E. D. 1885 BB, 65 (Batrachia).
1885 DD, 303 (Batrachia).
1885 EE, 612 ("batrachians").
1891 N, 7, 28 (Batrachia).
Coyle, R. F. 1909 A, 582.
Cunningham, J. T. 1897 A, 485.
Cunningham and Boulenger 1912 A, 157-230.
Cuvier, G. 1803 A, 168 ("batrachiens").
1815 A, 106 ("batrachiens").
1825 A, v, 2, 386-444, pls. xxiv-xxvii.
Dabelow, A. 1926 A, 95 ("sauropsiden").
Dana, J. D. 1863 B, 315 ("amphibians").

Dana, J. D. 1863 C, 343 ("amphibians").
1863 D, 130 ("batrachians").
Davidoff, M. 1879 A, 506 ("amphibien").
Davidson, A. 1895 A, 407.
Day, H. 1915 A, 427.
Delsman, H. C. 1913 A, 659 ("amphibien").
1924 A, 155 ("amphibians").
Dendy, A. 1907 A, 292 ("amphibien").
Deninger, K. 1914 A, 186-214 ("amphibien").
1915 A, 183-186 ("amphibien").
Dependorf, T. 1907 A, 545 ("amphibien").
Depéret, C. 1907 B ("amphibiens").
Diener, C. 1909 A, 32 ("amphibien").
Döderlein, L. 1902 A, 399 ("amphibien").
Dollo, L. 1883 G, 582.
1884 D, 86.
1885 C, 302 ("batrachiens").
1889 E, 146 ("batrachiens").
Dombrowski, B. A. 1925 A, 69 ("amphibien").
Drüner, L. 1902 A, 439 ("amphibien").
1904 A, 266 ("amphibien").
Du Toit, P. J. 1913 A, 244 ("amphibien").
Dunn, E. R. 1923 A, 129.
Eastman, C. R. 1912 C, 657.
1913 B, 677.
1914 B, 688 ("amphibians").
1916 A, 655 ("amphibians").
1917 B, 655 ("amphibians").
Edgeworth, F. H. 1920 A, 125.
1925 A, 225.
Eggeling, H. 1906 A, 105 ("amphibien").
Eimer, G. H. T. 1901 A, 256 ("amphibien").
Eisler, P. 1895 A ("amphibien").
Elliot, A. I. M. 1907 A, 648.
Emery, C. 1895 A, 218 ("amphibiens").
1901 A, 673 ("amphibien").
Erdl, M. 1843 A, 507 ("amphibien").
Fejérváry, G. J. 1921 C, 11 ("amphibien").
1925 A, 184 ("amphibien").
Field, H. H. 1895 A, 340 ("amphibien").
Foote, J. S. 1913 A ("amphibians").
1916 A, 18 ("amphibians").
Forster, A. 1905 A, 89-138.
Frassetto, F. 1915 A ("amfibi").
Freund, L. 1902 A.
Fuchs, H. 1906 A, 49 ("amphibien").
1907 A, 150 ("amphibien").
1909 B, 122.
1909 D, 61 ("amphibien").
1910 A, 39 ("amphibien").
1910 C, 480 ("amphibien").
1911 A, 33 ("amphibien").
1912 B, 105 ("amphibien").
1913 A, 62 ("amphibien").
1914 A, 32 ("amphibien").
1920 C, 93 ("amphibien").
1926 A, 119.
1926 B, 1-34.
Fürbringer, M. 1902 A, 192 ("amphibien").
1904 A ("amphibien").
1904 B, 503 ("amphibien").
Gadow, H. 1901 A, 397.
1901 B, 3.
1902 B, 345.
1913 A, 95.
1914 A, 506, 508.
Gaskell, W. H. 1898 A, 553.
Gaskell, W. H. 1905 A, 41 ("amphibians").
1910 A, 11 ("amphibians").
Gaupp, E. 1891 B, 110 ("amphibien").
1895 A, 57, seq. ("amphibien").
1897 A, 543 ("amphibien").
1898 B ("amphibien").
1899 A, 1004, 1058, 1061 ("amphibien").
1900 A ("amphibien").
1901 B, 943 ("amphibien").
1902 A, 167 ("amphibien").
1905 A, 277 ("amphibien").
1905 C, 130 ("amphibien").
1905 D, 931 ("amphibien").
1905 E, 160 ("amphibien").
1906 A, 32 ("amphibien").
1906 B, ("amphibien").
1908 C, ("amphibien").
1910 B, 355, 370 ("amphibien").
1910 C, 425 ("amphibien").
1910 D, 87 ("amphibien").
1911 A, 418 ("amphibien").
1911 B, 98, 113 ("amphibien").
1911 C, 436 ("amphibien").
1912 A, 561 ("amphibien").
1912 B, 218 ("amphibien").
1913 A, ("amphibien").
Gebhardt, F. A. M. W. 1907 A, 77 ("amphibien").
Gegenbaur, C. 1862 A, 179 ("amphibien").
1862 B, pls.
1866 A, 122, 123 ("amphibien").
1867 A, 57 ("amphibien").
1867 B, 369, 395 ("amphibien").
1870 A, 335 ("amphibien").
1870 C, 398 ("amphibien").
1880 A, 586 ("amphibien").
Gelderen, C. 1922 A, 234.
Gervais, P. 1859 A, 491 ("amphibiens").
Giebel, C. G. 1855 A, 98 (Batrachia).
Gill, T. 1873 E, 435 (Batrachia).
1897 A, 446.
1898 A, 697 ("amphibians").
1907 A, 491.
1910 B, 958.
Goeppert, E. 1896 B.
1897 A, 247 ("amphibien").
Goodrich, E. S. 1916 A, 261.
1924 A, 935.
Goodsir, J. 1857 A.
1857 B.
Gray, J. E. 1825 A, 213.
Greene, J. R. 1861 A, 219, 226 (Batrachia).
Gregory, W. K. 1904 A, 57, 58, fig. 10.
1910 A, 113.
1911 A, 509.
1912 D, 220.
1913 D, 806.
1913 E, 17.
1915 D, 317.
1916 D, 105.
1917 B, 311, 315.
1920 A, 114.
1926 B, 425 ("amphibians").
1927 G, 268 ("amphibians").
Gregory and Adams 1915 A, 763.
Gregory and Camp 1918 A.
Gregory, Miner and Noble 1923 A, 280.

Gregory and Noble 1924 A, 436 ("amphibians").
Grote, A. 1926 A, 458 ("amphibien").
Haeckel, E. 1868 A, 436, 448, 453.
1893 A, xvi ("amphibien").
Hanson, F. B. 1919 B, 66.
1920 A, 310.
1920 C, 3 ("amphibians").
Harkness, R. 1852 A, 258 (Batrachiæ).
Hase, A. 1913 A ("amphibien").
Hasse, C. 1873 B, 629 ("amphibien").
1873 D ("amphibien").
1892 C, 5 ("amphibien").
Hasse and Schwarck 1870 A, 34 ("amphibien").
Hatschek, B. 1889 A, 83 ("amphibien").
1889 B, 114 ("amphibien").
Hay, O. P. 1897 B, 774 (Batrachia).
1910 C, 3.
Heilprin, A. 1887 A, 45, 305.
Hertwig, O. 1874 B ("amphibien").
1892 A.
Hilzheimer, M. 1913 A, 473 ("amphibien").
Hoeven, J. v. d. 1866 A, 363 (Batrachia).
Hogg, J. 1839 A.
1841 A, 353.
Hollard, H. 1864 A, 13 ("batraciens").
1864 C, 360, 372 ("amphibiens").
Howes, G. B. 1891 A, 156.
1893 B, 268.
1893 C, 587.
1894 A, 77.
1902 A, 525 (Batrachia).
Howes and Swinnerton 1901 A, 2, 46, 69 (Batrachia).
Hubrecht, A. A. W. 1897 A, 29.
1908 A, 150.
Huene, F. 1907 A, 152-154 ("amphibien").
1908 H, 157-175 ("amphibien").
1910 F, 148-163 ("sauropsiden").
1911 G, 147-161 ("sauropsiden").
1912 D, 102 ("amphibien").
1912 F, 524 ("amphibien").
1922 G, 456 ("amphibien").
1926 A, 262.
Humphry, G. M. 1876 A, 668 ("batrachians").
Huxley, T. H. 1859 D, 401.
1859 H, 44, 46.
1863 E, 418.
1863 F, 427.
1869 G, 453.
1870 F, 528, 538, 549.
1874 B, 6, 9, 16.
1875 D, 23.
1876 E, 108, 124.
1876 F, 168.
1877 A, 58.
1879 A, 400.
1880 E, 471.
Ihering, H. 1880 A, 303 ("amphibien").
Iwanzoff, N. 1894 A, 578 ("amphibien").
Jacobshagen, E. 1920 A, 91 ("amphibien").
Jaekel, O. 1901 B, 53 ("amphibien").
1902 C, 610 ("amphibien").
1903 F, 33, 46 ("amphibien").
1906 D, 188.
1909 A, 193, 210.
1910 D, 123.
1911 A, 126.
Jaekel, O. 1912 A, 610 ("amphibien").
1913 A, 89 ("amphibien").
1927 A, 259 ("amphibien").
Jaekel and Philippi. 1903 A, 13 ("amphibien").
Jordan, D. S. 1898 A, 176 (Batrachia).
1905 A, i, 600; ii, 556.
1907 B, 226.
Juhn, M. 1923 A, 70 ("amphibien").
Julien, A. 1894 A, 174 ("batrachiens").
Kapelkin, W. 1900 A, 433 ("amphibien").
Kehrer, F. A. 1896 A, 347 ("amphibien").
Keith, A. 1911 A, 294.
Kellicott, W. E. 1905 A, 137.
Kerbert, C. 1876 A, 207 ("amphibien").
Kerr, J. G. 1908 A, 169.
1910 A, 203 ("amphibians").
1923 A, 114.
Kesteven, H. 1916 A, 303.
1919 A, 223.
1922 A, 316.
Kingsbury, B. F. 1895 A, 115.
Kingsbury and Reed 1908 A, 81.
1909 A, 549.
Kingsley, J. S. 1894 A, 640 (Batrachia).
1896 A, 147 ("batrachians").
1900 A, 205.
1901 A, 195.
1901 B, 337.
1902 B, 328.
1912 A, 185 ("amphibians").
1912 B, 82.
1925 A, 13, 36, 39, 41, 52, 119, 246, 262, 279.
Klaatsch, H. 1893 B, 651 ("amphibien").
Klaauw, C. J. 1924 B, 573.
Klein, E. F. 1868 A ("amphibien").
Klintz, J. H. 1911 A, 165 ("amphibien").
Koken, E. 1898 B, 142.
Köstlin, O. 1844 A ("batrachier").
Köthe, K. 1910 A, 55 ("amphibien").
Kravetz, L. 1906 A, 6 ("amphibien").
1911 A, 333 ("amphibien").
Kressmann, M. 1912 A, 428 ("amphibien").
Kupffer, C. 1893 A, 525 ("amphibien").
Laaser, P. 1903 A, 571 ("amphibien").
Lakjer, T. 1927 A, 191, 298 ("amphibien").
Larger, R. 1913 A, 702 ("amphibies").
Lavocat, A. 1885 A, 33 ("amphibiens").
1889 A, 43 ("amphibiens").
Lebedinsky, N. G. 1917 A, 316 ("amphibien").
Leche, W. 1887 A ("amphibien").
Le Damany, P. 1902 A, 337 ("batraciens").
1903 B, 275 ("batraciens").
1903 G, 127 ("batraciens").
1906 B, 158 ("batraciens").
Lemoine, V. 1889 A, 233 ("batraciens").
Leunis and Ludwig 1883 A, 599.
Leydig, F. 1873 B, 32.
1887 A, 534 ("batrachier").
1890 A, 441, 448 ("amphibien").
Lobley, J. L. 1908 A, 198.
Lubosch, W. E. 1907 A, 614 ("amphibien").
1908 A, 193 ("amphibien").
1911 A, 325 ("amphibien").
1911 B, 741, 748 ("amphibier").
Lull, R. S. 1904 C, 2.
1910 D, 153.
1917 B, 337.

Lydekker, R. 1903 D, 75.
Malbranc, M. 1875 A ("amphibien").
Mantell, G. A. 1844 A, 782 ("batrachians").
Marsh, O. C. 1899 C, 71 ("amphibians").
Matthes, E. 1921 A, 222 ("amphibien").
Matthew, W. D. 1911 D, 197 ("amphibians").
1915 A, 185, 294.
1916 H, 13 ("amphibians").
1923 C, 465.
Mead, C. S. 1904 A, 53 ("amphibians").
Meckel, J. F. 1825 A ("batrachier").
Meunier, S. 1903 A, 775 ("batraciens").
Miner, R. W. 1925 A, 148, 186.
Mivart, St. G. 1871 B, 374.
Montgomery, T. H. 1901 A, 21733 ("amphibians").
Moodie, R. L. 1908 B, 361.
1908 D, 447.
1908 E, 559.
1908 F, 249.
1908 G, 511.
1909 A, 354.
1909 C, 118, 123.
1909 D, 243.
1909 E, 38.
1909 F, 219, 220.
1910 C, 233.
1911 C, 375.
1911 E, 235.
1911 H, 239, 243.
1912 E, 37.
1913 A, 183.
1914 A, 13.
1915 E, 463.
1915 F, 186.
1915 G, 369.
1915 H, 637, 641.
1915 I, 139, 146 ("amphibians").
1915 J, 317.
1916 A.
1922 B, 320, fig. 1.
Mook, C. C. 1918 A, 468.
Müller, J. 1832 A, 508 (A. nuda).
Nauck, E. T. 1923 A, 2 ("amphibien").
Noble, G. K. 1925 B, 1.
1926 A, 1.
1926 C, 1.
Noordenbos, W. 1905 B, 390 ("amphibien").
Nopcsa, F. 1926 A, 655.
Osborn, H. F. 1899 J, 415.
1905 N, 236.
1916 E, 511, 602.
1917 B, 307.
1926 C, 339 ("amphibians").
Oswald, F. 1911 A, 405.
Owen, R. 1842 F, 83 ("batrachians").
1848 B (Batrachia).
Packard, A. S. 1904 A, 221 ("amphibians").
Paramore, R. H. 1910 A, 1394.
Parker, W. K. 1877 B, 529.
1887 B, 53.
1890 A, 62.
Parker and Haswell 1897 A, 245, 271.
Parsons, F. G. 1903 A, 323.
Perrier, E. 1920 A ("batraciens").
Peter, K. 1898 A ("amphibien").
Peters, W. 1867 A, 726 ("batrachier").
Peters, W. 1868 A, 592 ("amphibien").
1868 B, 388.
Petronievics, B. 1921 A, 107 ("amphibiens").
Pfeiffer, H. 1854 A, 46 ("batrachier").
Pompeckj, J. F. 1912 A, 338.
Pycraft, W. P. 1909 A, 204.
Rabl, C. 1901 A, 520 ("amphibien").
1903 A, 155, 184 ("amphibien").
Raymond, P. E. 1907 A, 835 ("amphibians").
Reed, H. D. 1920 A, 325.
Reichert, K. B. 1837 A, 139 ("amphibien").
1849 A, 477, 494 ("amphibien").
Retterer, E. 1908 A, 486 ("amphibiens").
Reynolds, S. H. 1897 A, 133-188.
Rice, E. L. 1920 A.
Röse, C. 1897 A, 60 ("amphibien").
Rohon, J. V. 1902 A, 25 ("amphibien").
Romer, A. S. 1922 B, 523.
1924 A, 123, figs. 2, 3.
Ryder, J. 1885 E, 91 ("amphibians").
Sabatier, A. 1897 A, 806 ("amphibiens").
1902 A, 99 ("amphibiens").
Sagemehl, M. 1883 A ("amphibien").
Schauinsland, H. 1906 A, 487 ("amphibien").
Schlosser, M. 1898 D, 120 ("amphibien").
1903 G, 145.
Schmalhausen, J. J. 1907 A, 177 ("amphibien").
1908 A, 337 ("amphibien").
1916 B, 138.
1917 A, 102.
1923 B, 544 ("amphibien").
Schöne, G. 1902 A, 8 ("amphibien").
Schuchert, C. 1915 A, 754, 797.
Schuchert and Barrell 1914 A, 25 ("amphibians").
Schuchert and Levene 1927 A, 289 ("amphibians").
Scott, W. B. 1917 A, 33, 144, 155.
Sedgwick, A. 1894 A, 52.
Seeley, H. G. 1872 B, 22.
1887 D, 338.
1888 I, 235.
1900 A, 281.
Semon, R. 1898 A, 100 ("amphibien").
1901 A, 180 ("amphibien").
Serres, M. 1852 A, 144 ("batrachiens").
Sewertzoff, A. 1896 A, 207.
1897 A, 410 ("amphibien").
1908 A.
1926 A, 507.
1926 D, 76 ("amphibien").
Seydel, O. 1899 A ("amphibien").
Shitkov, B. M. 1899 A, 256 ("amphibien").
Shore, T. W. 1887 A, 364.
Sirena, S. 1872 A, 125 ("amphibien").
Sixta, V. 1899 A, 329 ("amphibien").
1901 A, 326 ("amphibien").
1905 A, 674 ("amphibien").
Smith, G. E. 1911 A, 293.
1912 A, 426.
Sollas, W. J. 1916 A, 110.
Sonies, F. 1907 A, 432 ("amphibien").
Spencer, W. B. 1886 A, 173, 220.
Steiner, H. 1921 A, 513 ("amphibien").
Stejneger, L. 1904 A, 924.
1907 A, 1.
Stejneger and Barbour 1917 A, 5.

Steinmann, G. 1907 A, 421.
1908 A, 207 ("amphibien").
Stephan, P. 1900 A, 361 ("batrachiens").
Strecker, C. 1887 A, 303 ("amphibien").
Stromer, E. 1912 A, 54.
Sutton, J. B. 1884 A, 570 ("amphibian").
Taschenberg, O. 1894 A, 3506-3575.
Terra, P. 1911 A, 137, 222 ("amphibien").
Thevenin, A. 1906 A, 145 ("amphibiens").
1909 A, 1223 ("amphibiens").
1910 A, 60 ("amphibiens").
Thyng, F. W. 1906 A, 45.
Tomes, C. S. 1875 A, 93 (Batrachia).
Tornier, G. 1894 A, 96 ("amphibien").
1894 B, 104 ("amphibien").
Traqualr, R. H. 1900 C, 506.
Van Gelderen, C. 1925 A, 501 ("amphibien").
Van Wijhe, J. W. 1922 A, 293 ("amphibien").
Vanhöffen, E. 1891 A, 134 ("amphibien").
Veit, O. 1916 A, 375 ("amphibien").
Versluys, J. 1903 A, 167 ("amphibien").
1912 B, 552 ("amphibien").
1912 C, 313.
Vialleton, L. 1917 A, 191 ("amphibiens").
Villiers, C. G. S. 1922 A ("amphibien").
Vitali, G. 1909 A, 208 ("anfibi").
Voit, M. 1923 A, 69 ("amphibien").
Wagner, R. 1843 A, 146 (Batrachia).
Wallace, A. R. 1876 A, i, 489; ii, 559.
Wamich, P. 1913 A, 18 ("amphibien").
Watson, D. M. S. 1913 D, 25 ("amphibians").
1914 I, 532.
1916 C, 632.
1916 E, 85.
1917 A, 981.
1917 C, 168 (Batrachia).
1919 A, 287.
1919 B, 1.
1919 C, 239.
1925 A, 820, 848, 850.
1926 A, 189.
Wegner, R. N. 1922 A, 413 ("amphibien").
Weidenreich, F. 1922 A, 45 ("amphibien").
1926 A, 45 ("amphibien").
Werner, F. 1904 A, 332 ("batrachier").
Wiedersheim, R. 1892 A, 46 ("amphibien").
Wilder, B. 1897 A, 295.
Williston, S. W. 1909 A, 393.
1910 B, 71 ("amphibians").
1912 E, 258.
1912 F, 91.
1913 B, 625 ("amphibians").
1914 A, 3 ("amphibians").
1914 D, 410, 416 ("amphibians").
1916 B, 194, 200.
1917 D, 985.
1918 A, 75 ("amphibians").
1925 A, 1, 18.
Wintrebert, P. 1910 A, 178, 300, 419, 1081 ("amphibiens").
1910 B, 78, 129, 172, 226 ("batraciens").
Woodward, A. S. 1898 E, 329.
1904 D, 141.
1910 B, 464 ("amphibians").
1911 C, 46.
1917 D, lxvii.
1922 B, 29.
Woodward, H. 1878 A, 21.
1904 B, 141.
Woodward and Sherborn 1891 A, 31.
Wright, W. 1909 A, 672.
Ziegler, H. E. 1901 A, 235 ("amphibien").
1923 A, 67, fig. 4 ("amphibien").
Zierler, F. E. 1905 A, 511 ("amphibien").
Zittel, K. A. 1895 A, 306.
1897 A, 128 ("amphibien").
1901 A, 412 ("amphibians").
Zittel and Broili 1911 A, 143.
1923 A, 162-209.
Zittel, Eastman, etc. 1902 A, 114.
Zwick, W. 1897 A, 62.

Subclass PHRACTAMPHIBIA Haeckel.

Haeckel, E. 1866, Gen. Morphol.
Gadow, H. 1898 A, 11.
Haeckel, E. 1868 A, 441, 448.
1873 A, 512.

Order STEGOCEPHALI Cope.

Hay, O. P. 1902 A, 409.
Abel, O. 1908 D (208), ("stegocephalen").
1909 F, 455 ("stegocephalen").
1910 B (185, 186), ("stegocephalen").
1912 F, 212, 384, 414, 702.
1919 A, 233, fig. 251 (Stegocephalia).
1920 A, 346 ("stegocephalen").
1921 A, 144, 246, 252 ("stegocephalen").
1926 B, 208 ("stegocephalen").
Allis, E. P. 1898 A, 443.
1905 A, 494.
1919 B, 82.
1923 A, 48, 49.
Amalitsky, V. P. 1924 A, 62 (Stegocephalia).
1924 B, 67 (Stegocephalia).
Anthony, R. 1912 A ("stégocephales").
1913 A, 243, 269 ("stégocephales").
Arldt, T. 1907 D, 683.
1907 E, 204 (Stegocephala).
Arldt, T. 1909 B, 353 ("stegocephalen").
1916 A, 96 ("stegokephalen").
Arthaber, G. 1910 A, 552 ("stegocephalen").
Bardeleben, K. 1901 A, 37 ("stegocephalen").
1907 A, 36 ("stegocephalen").
1907 B, 154 ("stegocephalen").
Bluntschli, H. 1912 B, 380 ("stegocephalen").
Boas, J. E. V. 1914 B, 553 ("stegocephalen").
1914 C, 240 ("stegocephalen").
Bogoljubsky, S. 1914 A, 661 (Stegocephala).
Boulenger, G. A. 1901 B, 401 (Stegocephalia).
1902 F, 382 (Stegocephalia).
1904 C, 479 (Stegocephala).
1917 C, 457 ("stégocéphales").
Brauns, D. 1890 A, 161.
Braus, H. 1906 A, 246 ("stegocephalen").
Broili, F. 1904 A, 7, 105 ("stegocephalen").
1904 D, 578 ("stegocéphalen").
1905 A, 12 ("stegocéphalen").

Broili, F. 1908 D, 235 ("stegocephalen").
1917 A, 564 ("stegocephalen").
1926 A ("stegocephalen").
Broom, R. 1903 B, 499 ("stegocephalians").
1904 B, 90 (Stegocephalia).
1908 A, 1049 (Stegocephalia).
1909 B, 162.
1910 C, 475 ("stegocephalians").
1913 B, 465 ("stegocephalian").
1913 H, 73.
1917 A, 976, 977 ("stegocephs").
1922 A, 23 ("stegocephalians").
Case, E. C. 1911 B, 14, 15.
1915 A, 96.
1921 D, 338 ("stegocephalians").
1924 B, 7.
Cope, E. D. 1885 DD, 305.
1891 N, 28.
Credner, H. 1882 B, 1 ("stegocephalen").
1893 A, 639 ("stegocephalen").
Cunningham and Boulenger 1912 A, 159, 168, 170.
Dabelow, A. 1926 A, 96 ("stegocephalen").
Dames, W. 1899 B, 365.
Davidson, A. 1895 A, 407.
Depéret, C. 1912 A, 703 ("stégocephales").
Döderlein, L. 1900 A, 329 ("stegocephalen").
Dollo, L. 1884 D, 86.
Drevermann, F. 1920 A ("stegocephalen").
Du Toit, R. J. 1911 A, 420 (Stegocephalia).
Eggeling, H. 1906 A, 107 ("stegocephalen").
Eimer, G. H. T. 1901 A, 63 ("stegocephalen").
Emery, C. 1901 A, 672 ("stegocephalen").
Fejérváry, G. J. 1921 C, 11 ("stegocephalen").
Frassetto, F. 1915 A ("stegocefali").
Fuchs, H. 1908 B, 589 ("stegocephalen").
1909 B, 113 ("stegocephalen").
1909 C, 87 ("stegocephalen").
1909 D, 29 ("stegocephalen").
1910 A, 45 ("stegocephalen").
1911 B, 398 ("stegocephalen").
1912 B, 89 ("stegocephalen").
1920 A (Stegocephalia).
Fürbringer, M. 1902 A, 215 ("stegocephalen").
1904 A ("stegocephalen").
Geinitz and Deichmüller 1882 B, 13 ("stegocephalen").
Gadow, H. 1901 B, 78 (Phractamphibia).
1902 B, 359 (Stegocephala).
Gaupp, E. 1895 A, 56, seq. ("stegocephalen").
1905 D, 932 ("stegocephalen").
1906 A, 56 ("stegocephalen").
1910 A, 535 ("stegocephalen").
1912 A, 562 ("stegocephalen").
1913 A, 88 (Stegocephala).
Gebhardt, F. A. M. W. 1907 A, 82 ("stegocephalen").
Gill, T. 1898 A, 697 ("stegocephals").
Goodrich, E. S. 1924 A, 935 (Stegocephala).
Gregory, W. K. 1913 D, 806 (Stegocephalia).
1913 E, 4 ("stegocephalians").
1915 D, 322, 334, 365.
1920 A, 221.
1922 A, 10 ("stegocephs").
Gregory and Adams 1915 A, 763 ("stegocephalians").
Hase, A. 1907 A, 656 ("stegocephalen").
Heilmann, G. 1926 A, 207 ("stegocephalians").
Heilprin, A. 1887 A, 310 (Stegocephala).
Hilzheimer, M. 1913 A, 474 ("stegocephalen").
Hommes, J. H. 1924 A, 36 (Stegocephalia).
Howes, G. B. 1902 A, 525 (Stegocephala).
Howes and Swinnerton 1901 A, 2, 3, 54, 69, 70 (Stegocephalia).
Hubrecht, A. A. W. 1897 A, 30.
Huene, F. 1909 D, 325 ("stegocephalen").
1911 B, 398 ("stegocephalen").
1912 D, 102 ("stegocephalen").
1913 G, 501 ("stegocephalen").
1920 F, 533 ("stegocephalen").
1922 G, 395-460 ("stegocephalen").
Jaekel, O. 1901 B, 53 ("stegocephalen").
1902 A, 107 ("stegocephalen").
1902 D, 127 ("stegocephalen").
1903 A, 133 ("stegocephalen").
1903 F, 28, fig. 1 (Stegocephala).
1904 B ("stegocephalen").
1904 C, 185 ("stegocephalen").
1905 B, 61 ("stegocephalen").
1905 C, 144 ("stegocephalen").
1906 A, 28 ("stegocephalen").
1908 A, 140 ("stegocephalen").
1909 A, 194.
1913 A, 86 ("stegocephalen").
1916 A, 175 ("stegocephalen").
1921 A, 222 ("stegocephalen").
1922 A, 1 (Hemispondyla, Miosauria).
Kehrer, F. A. 1896 A, 353 ("stegocephalen").
Kingsley, J. S. 1900 B, 167 ("stegocephals").
1901 A, 204.
1901 B, 338 ("stegocephalans").
1902 B, 333 ("stegocephals").
1925 A, 36, 121, 279.
Klaatsch, H. 1890 A, 232 ("stegocephalen").
Koken, E. 1893 B, 240, 269 ("stegocephalen").
Lakjer, T. 1927 A ("stegocephalen").
Lucas, F. A. 1902 B, 119.
Lull, R. S. 1917 B, 487 (Stegocephalia).
1924 A, chart (Stegocephalia).
Lydekker, R. 1903 D, 75 (Stegocephalia).
Matthew, W. D. 1908 D, 816 (Stegocephalia).
1915 A, 185, 294 (Stegocephalia).
Mayhew, R. L. 1924 A, 317 (Stegocephalia).
Miner, R. W. 1925 A, 148 (Stegocephalia).
Mollier, S. 1897 A, 3 ("stegocephalen").
Moodie, R. L. 1908 B, 373 (Stegocephala).
1908 G, 512, fig. 1 (Stegocephalia).
1909 C, 118, 119, 123 (Stegocephala).
1909 D, 243 (Stegocephala).
1909 F, 220 (Stegocephala).
1911 C, 380 (Stegocephalia).
1912 D, 326 (Stegocephala).
1913 A, 183.
1915 G, 371 (Stegocephalia).
Nauck, E. T. 1923 A, 2 ("stegocephalen").
Nopcsa, F. 1923 E, 1047, 1052.
1926 A, 635 (Stegocephalia).
Osborn, H. F. 1903 H, 457, 506.
1904 M, 257 (Stegocephala).
Pehrson, T. 1922 A, 53 ("stegocephals").
Perrier, E. 1920 A, 281 ("stégocéphales").
Perrin, A. 1889 A, 521 ("stégocéphales").
Petronievics, B. 1921 A, 105 ("stégocéphales").
Pompeckj, J. F. 1912 A, 338, 346 ("stegocephalen").

Puccioni, N. 1908 A, 56 ("stegocefali").
Rabl, C. 1903 A, 166, 180 ("stegocephalen").
Romer, A. S. 1922 B, 519, 523 (Stegocephalia).
Schmalhausen, J. J. 1916 B, 147 ("stégocéphales").
1917 A, 106 (Stegocephala).
1917 B, 134 (Stegocephala).
Schuchert, C. 1914 B, 279 (Stegocephalia).
1915 A, 802.
Schwartz, H. 1908 A, 315 ("stegocephalen").
1908 B, 63 ("stegocephalen").
Sewertzoff, A. N. 1908 A, 359, 363 (Stegocephala).
1926 D, 94 (Stegocephala).
Smith, G. E. 1911 A, 294 (Stegocephalia).
1912 A, 427 (Stegocephalia).
Sollas, W. J. 1916 A, 115.
Steiner, H. 1921 A, 534 ("stegocephalen").
1922 A, 340 ("stegocephalen").
Steinmann, G. 1907 A, 421 (Stegocephala).
1908 A, 206 ("stegocephalen").
Stensiö, E. A. 1921 A, 142 ("stegocephalians").
Sterling, S. 1908 A, 166, 180 ("stegocephalen").
Stremme, H. 1909 A, 504 ("stegocephalen").
Stromer, E. 1912 A, 57 (Stegocephali); 60 (Labyrinthodontii).
1913 A, 61 ("stegocephalen").
Suschkin, P. 1910 A, 250 (Stegocephala).
Terra, P. 1911 A, 225 (Stegocephala).
Thevenin, A. 1909 A, 1223 ("stégocéphales").
1910 A, 4 (stégocéphales").
Thyng, F. W. 1906 A, 43 (Stegocephala).
Tims, H. W. M. 1903 A, 132 (Stegocephala).
Versluys, J. 1912 B, 575 ("stegocephalen").
Villiers, C. G. S. 1922 A, 172, 218 (Stegocephalia).
Watson, D. M. S. 1912 A, 1 (Stegocephalia).
Watson, D. M. S. 1912 B, 586 (Stegocephalia).
1913 C, 341 (Stegocephalia).
1913 D, 24 (Stegocephalia).
1913 F, 957 (Stegocephalia).
1914 A, 310.
1914 C, 396 (Stegocephalia).
1914 D, 167 (Stegocephalia).
1914 F, 780 (Stegocephalia).
1916 E, 83 (Stegocephalia).
1917 A, 983 ("stegocephs").
1919 B, 2 (Stegocephalia).
Wegner, R. N. 1922 A, 464.
Wilckens, O. 1911 A, 708 ("stegocephalen").
Williston, S. W. 1904 B, 178.
1908 B, 396.
1909 A, 394.
1910 E, 540.
1914 A, 2 (Stegocephalia).
1916 B, 200 (Stegocephalia).
1918 A, 75.
1925 A, 31, 91, 96, 99, 119, 122, 126, 132 (Stegocephalia).
Wills, L. J. 1916 A, 5 (Stegocephalia).
Wiman, C. 1910 A, 34 ("stegocephalen").
1915 A, 1 ("stegocephalen").
1916 D, 413 ("stegocephalians").
Wintrebert, P. 1910 A, 1081 ("stégocéphales").
1910 B, 79 ("stégocéphales").
Woodward, A. S. 1897 C, 371 (Labyrinthodontia).
1909 A, 324 (Stegocephala).
1910 B, 464 (Stegocephala).
1911 C, 46 (Stegocephalia).
1922 B, 27, 29 (Stegocephala).
Zittel and Broili 1911 A, 147.
1923 A, 161.
Zittel, Eastman, etc. 1902 A, 117 (Stegocephalia).

Suborder Branchiosauria.

Hay, O. P. 1902 A, 410 (Microsauria, part).
Abel, O. 1912 F, 219 ("branchiosaurier").
1919 A, 294 (Phyllospondyli).
Arldt, T. 1907 D, 662 (Lepospondyli).
1916 A, 97 ("branchiosaurier").
Boulenger, G. A. 1901 B, 401.
1902 F, 383.
Broili, F. 1904 A, 26 (Lepospondyli).
1908 E, 298 (Lepospondyli).
Bullman, O. M. B. 1928 A, 250 ("branchiosaurs").
Day, H. 1915 A, 430.
Frassetto, F. 1915 A, 29.
Fuchs, H. 1909 B, 149 (Branchisauri).
1909 D, 55 ("branchiosaurier").
Gadow, H. 1901 B, 80 (Branchiosauri, Lepospondyli).
Gregory, W. K. 1915 D, 365.
Huene, F. 1913 G, 501 ("branchiosaurier").
1926 A, 262.
Jaekel, O. 1909 A, 194 (Lepospondyli); 204 (Branchiosauri).
1911 A, 109 (Branchiosauri).
1922 A, 3 (Branchiosauri).
Lohest, M. 1888 B, cxx ("amphibien").
Lydekker, R. 1909 C, 469.
1910 F, 672.
Moodie, R. L. 1908 B, 363, 373.
Moodie, R. L. 1908 E, 566.
1908 G, 516.
1909 C, 118, 121.
1909 E, 38, 39.
1909 F, 220.
1909 G, 362.
1910 F, 234.
1911 H, 243.
1912 D, 324, 326.
1912 E, 35.
1915 F, 189, 190.
1916 A, 4, 50 (Branchiosauria); 75 (Lepospondyli).
Pompeckj, J. F. 1912 A, 341, 342 ("branchiosaurier").
Schwartz, H. 1908 A, 315 (Lepospondyla).
Sollas, W. J. 1920 A, 526.
Steinmann, G. 1907 A, 422 (Branchiosauri).
Stromer, E. 1912 A, 59 (Phyllospondyli).
Thevenin, A. 1910 A, 4, 5 ("phyllospondyles").
Watson, D. M. S. 1914 D, 171 ("branchiosaurs").
1917 C, 169, 181 (Phyllospondylia, Lepospondylia).
1919 C, 239.
1921 C, 73 (Phyllospondyli).
Williston, S. W. 1912 B, 657 (Lepospondyli).
1912 E, 258 ("branchiosaurs").

Williston, S. W. 1916 B, 209 (Lepospondyli).
1925 A, 119.
Wintrebert, P. 1910 A, 1081 ("branchiosauriens").
1910 B, 226 (Branchiosaurus).
Zittel and Broili 1911 A, 160 (Phyllospondyli).
1923 A, 198 (Phyllospondyli).
Zittel, Eastman, etc. 1902 A, 124 (Phyllospondyli).

PROTRITONIDÆ Lydekker.

Nicholson and Lydekker 1889 A, 1022, 1039.
Hay, O. P. 1902 A, 410.
Unless otherwise indicated the authors, as quoted, use for this family the name Branchiosauridæ, and for the genus *Protriton* the name *Branchiosaurus*.
Abel, O. 1912 F, 213 (Branchiosaurus).
1919 A, 295.
Arldt, T. 1907 D, 277.
1908 A, 1.
1912 A, 650, 658.
Bulman and Whittard 1926 A, 536.
Credner, H. 1882 B (Branchiosaurus).
1882 C, 43 (Branchiosaurus).
1893 A, 683, 698, 703 (Branchiosauridæ).
Deichmüller, J. V. 1884 A, 5, pl. i (Protriton).
Eimer, G. H. T. 1901 A, 196 (Branchiosaurus).
Fejérváry, G. J. 1920 A, 363.
Fritsch, A. 1879 A, 720 (Protriton).
1883 A, 69 (Branchiosauridæ).
Fuchs, H. 1909 C, 37.
1909 D, 29 (Branchiosaurus).
1910 A, 45 (Branchiosaurus).
Gaudry, A. 1875 A, 300 (Protriton).
1875 E, 442 (Salamandrella).
1876 A, 721 (Protriton).
1878 A, 957 (Protriton).
Gaupp, E. 1911 E, 406 (Branchiosaurus).
Geinitz and Deichmüller 1882 B, 13, 30, 41 (Branchiosaurus).
Gregory, W. K. 1911 A, 509 ("branchiosaurs").
1915 D, 375, fig. 15 (Brachiosaurus).
1917 B, 313, 316, 318.
Huene, F. 1913 G, 502, figs. 1, 11, 19, 20 (Branchiosaurus); 505 (Branchiosauridæ).
1920 C, 211.
Jaekel, O. 1903 A, 119 (Branchiosaurus).
1903 F, 32 (Branchiosaurus).
1909 A, 204.
Jaekel, O. 1909 B, 588, figs. 1, 2 (Branchiosaurus).
1922 A, 2 ("branchiosauriden").
1927 A, 259 ("branchiosauriden").
Kesteven, H. L. 1919 A, 223, fig. 1 (Branchiosaurus).
Kingsley, J. S. 1902 C, 333 (Branchiosaurus).
Lakjer, T. 1927 A, 199, fig. 76 (Branchisaurus).
Moodie, R. L. 1909 E, 43 (Branchiosaurus).
1910 A, 369.
1910 C, 234.
1911 C, 382.
1912 D, 326.
1915 F, 186.
Noble, G. K. 1925 C, 7 ("branchiosaurs").
Perrin, A. 1899 A, 521, figs. 1, 3 (Branchiosaurus).
Perrier, E. 1920 A, 277 (Branchiosaurus).
Schönfield, G. 1911 A, 19, pls. i-iii (Branchiosaurus).
Schwarz, H. 1908 A, 324 (Branchiosaurus).
Seitz, A. L. L. 1907 A, 249 (Branchiosaurus).
Stadtmüller, F. 1926 A, 159, fig. 5 (Branchiosaurus).
Stappenbeck, R. 1905 A, 401 (Branchiosaurus).
Steiner, H. 1921 A, 535 (Branchiosauridæ).
Steinmann, G. 1908 A, 207 ("branchiosaurier").
Thevenin, A. 1905 A, 1268 (Branchiosaurus).
1906 A, 146 (Branchiosaurus).
1909 A, 1223 (Protriton).
1910 A, 5, 27 (Branchiosaurus).
Thyng, F. W. 1906 A, 44, fig. C (Branchiosaurus).
Watson, D. M. S. 1917 C, 170.
1921 C, 72 (Branchiosaurus).
Wintrebert, P. 1910 A, 1082.
1910 B, 78, 172 ("protritonides").
Woodward, A. S. 1898 E, 329 (Branchiosaurus).
Zittel and Broili 1911 A, 160.
Zittel, Eastman, etc. 1902 A, 124.

MICRERPETON Moodie. Type *M. caudatum* Moodie.

Moodie, R. L. 1909 E, 39.
Arldt, T. 1916 A, 98.
Bulman and Whittard 1926 A, 578.
Moodie, R. L. 1908 G, 535.
1912 D, 327, 330.
1915 E, 463.
1915 G, 369.
1915 J, 322.
1916 A, 51.
Pompeckj, J. F. 1912 A, 342.
Watson, D. M. S. 1917 C, 170.
1921 C, 72.
Zittel and Broili 1911 A, 162.
1923 A, 199.

Micrerpeton caudatum Moodie.

Moodie, R. L. 1909 E, 38, 39, figs. 1-6.
Lydekker, R. 1910 F, 672.
Miner, R. W. 1925 A, 171.
Moodie, R. L. 1908 B, 362, figs. 1, 3.
1908 E, 564, fig. 4.
1908 G, 516, figs. 4, 5.
1909 C, 118.
1910 A, 368.
1910 C, 233.
1911 H, 242, pl. ii, fig. 1.
1912 A, 277.
1912 D, 326, 330, 331.
1914 A, 22.
1915 J, 322.
1916 A, 52, pl. ii; pl. xxv, fig. 4; text-fig. 13.
Pennsylvanian (Mazon Creek); Illinois.

EUMICRERPETON Moodie. Type *E. parvum* Moodie.

Moodie, R. L. 1910 A, 369.
Arldt, T. 1916 A, 98.
Bulman and Whittard 1926 A, 578.
Gregory, W. K. 1917 B, 311.
Moodie, R. L. 1912 D, 330.
1915 E, 463.
1916 A, 57.
Osborn, H. F. 1917 B, 179, fig.
Schuchert and Levene 1927 A, 290, fig.
Watson, D. M. S. 1921 C, 72.

Eumicrerpeton parvum Moodie.

Moodie, R. L. 1910 A, 369, figs. 1-4.
1911 B, 429, fig. 1.
1912 A, 277.
1912 D, 326, 331, pl. iii, figs. 3, 4; pl. iv; pl. v, fig. 1; pl. vi, figs. 1, 2.
1914 A, 19.
1915 I, 146.
1915 J, 323, figs. 5, 6.
1916 A, 57, pl. iii, figs. 1, 2; pl. v, fig. 1; text-figs. 14, 15.
Pennsylvanian (Mazon Creek); Illinois.

MAZONERPETON Moodie. Type *M. longicaudatum* Moodie.

Moodie, R. L. 1912 D, 336.
Bulman and Whittard 1926 A, 578.
Moodie, R. L. 1916 A, 61, pl. v, fig. 2.
Watson, D. M. S. 1921 C, 72.

Mazonerpeton costatum Moodie.

Moodie, R. L. 1912 D, 326, 341, pl. ii, fig. 3; pl. viii, fig. 4; pl. ix, fig. 2; pl. x.
1912 A, 278.
1914 A, 22.

Moodie, R. L. 1916 A, 63, pl. iv, fig. 3; text-fig. 15.
Pennsylvanian (Mazon Creek); Illinois.

Mazonerpeton longicaudatum Moodie.

Moodie, R. L. 1912 D, 326, 337, pl. iii, figs. 1, 2; pl. vii, fig. 3; pl. x.
1912 A, 278.
1914 A, 22.
1916 A, 61, pl. iii, figs. 5, 6; text-fig. 14*a*.
Pennsylvanian (Mazon Creek); Illinois.

SPARODUS Fritsch. Type *S. validus* Fritsch.

Hay, O. P. 1902 A, 411.
Moodie, R. L. 1909 E, 40.
1912 D, 326.
The systematic relationships of this genus are in doubt.

Sparodus sp. indet.

Hay, O. P. 1902 A, 411.
Lambe, L. M. 1904 C, 19, 35, 45.
Moodie, R. L. 1914 A, 26.
1916 A, 66.
Pennsylvanian (Joggins); Nova Scotia.

Suborder DIPLOCAULIA Moodie.

Moodie, R. L. 1909 F, 220.
Case, E. C. 1911 B, 90.
Gregory, W. K. 1917 B, 316 (Euamphibia).
Moodie, R. L. 1909 D, 243 (Euamphibia, in part; Diplocaulia).
1909 F, 220 (Euamphibia, in part).
1911 H, 243 (Euamphibia, in part).
1912 A, 278 (Euamphibia, in part).

Moodie, R. L. 1912 D, 326 (Euamphibia, in part).
1912 E, 31.
1915 F, 190.
1915 H, 638.
1916 A, 34, 46.
Williston, S. W. 1916 B, 209 (Lepospondyli).

DIPLOCAULIDÆ Cope.

Hay, O. P. 1902 A, 416.
Arldt, T. 1909 B, 354 ("diplocauliden").
1912 A, 656.
1916 A, 101, 143 ("diplocauliden").
Broili, F. 1902 A, 539.
1904 A, 26.
1905 A, 14.
Case, E. C. 1911 B, 14, 15, 79, 85.
1915 A, 96.
Huene, F. 1912 E, 472 ("diplocauliden").

Huene, F. 1913 G, 505 (Nectridei).
Gregory, W. K. 1917 B, 313.
Moodie, R. L. 1913 A, 190.
Watson, D. M. S. 1917 C, 170.
Williston, S. W. 1909 D, 131.
1910 D, 534.
1912 B, 657.
1916 B, 209.
Zittel and Broili 1911 A, 165.
1923 A, 202.

DIPLOCAULUS Cope. Type *D. salamandroides* Cope.

Hay, O. P. 1902 A, 416.
Abel, O. 1919 A, 231, 303, fig. 183.
1920 A, 353.
1921 A, 298.
Anonymous 1912 A, 519.
Arldt, T. 1916 A, 101.

Broili, F. 1902 A, 536, fig. 3.
1904 A, 7, 26, 28, 48.
1905 A, 13.
1913 A, 98.
1913 C, 529.
1914 B, 166 (Batrachiderpeton a syn.?).

Broom, R. 1903 B, 499.
1910 A, 214.
Case, E. C. 1900 A, 722.
1908 C, 579.
1908 D, 567, figs. 12, 13.
1911 B, 14, 15, 79, 85.
1915 A, 111, 115, 125.
Cummins, W. F. 1908 A, 745.
Douthitt, H. 1917 B, 3-40, figs. 2-4, 6, 7.
Geol. Mag. 1912 A, 519.
Gregory, W. K. 1917 B, 312, 316.
Huene, F. 1912 E, 472.
1913 G, 503, fig. 3.
1919 A, 181.
1922 G, 447, 452.
Jaekel, O. 1903 A, 117, 125, 126, figs. 5, 6.
1914 A, 209.
Kingsley, J. S. 1925 A, 122, fig. 128.
Lakjer, T. 1927 A, 192, 198, 205.
Matthew, W. D. 1909 G, 93, figs. 3, 4.
Mehl, M. G. 1912 C, 409.
1921 A, 48.
Moodie, R. L. 1908 G, 520, 521.
1909 F, 220.
1911 C, 377.
1912 E, 31.
1913 A, 190.
1915 G, 372.
1915 J, 318.
Neumayer, L. 1904 A, 121.
Nopcsa, F. 1923 E, 1052, fig. 9.
Osborn, H. F. 1902 B, 93, fig. 1.
1916 E, 613, figs. 24, 25.
1917 B, 179, 180, 182, figs.
Romer, A. S. 1922 B, 557, 587, pl. xxxvii.
1925 B, 461.
Schuchert, C. 1910 A, 570.
Sternberg, C. H. 1909 C, 227.
Watson, D. M. S. 1913 F, 960.
1916 E, 86.
1917 C, 170.
1919 B, 58.
Williston, S. W. 1909 D, 122.
1910 A, 271, pl. xv, fig. 7.
1910 F, 600.
1911 D, 379.
1913 B, 627.
1914 C, 59.
1915 A, 578.
1916 B, 210, fig. 52.
1917 A, 316.
1918 B, 110.
1925 A, 162.
Zittel and Broili 1911 A, 165.
1923 A, 174, 202, figs. 271, 285, 308.

Diplocaulus copei Broili.

Broili, F. 1904 A, 21, pl. ii; pl. iii, figs. 1, 2.
1902 A, 536 (Name only).
Case, E. C. 1911 B, 22, 79, pl. v, figs. 1, 2.
1915 A, 96.
Douthitt, H. 1917 B, 4.
Moodie, R. L. 1914 A, 17.
Sternberg, C. H. 1909 C, 254, 255.
Williston, S. W. 1909 D, 122.
1910 D, 534.
1918 B, 110.
Permian (Clear Fork); Texas.

Diplocaulus limbatus Cope.

Hay, O. P. 1902 A, 416.
Beede, J. W. 1907 A, 120, 139.
Broili, F. 1904 A, 7, 24.
Case, E. C. 1902 B, 63 (This species?).
1911 B, 17, 79, 85, 91, pl. i, text-fig. 1.
1915 A, 96.
Cummins, W. F. 1908 A, 743.
Douthitt, H. 1917 B, 4, 33, fig. 7.
Huene, F. 1912 E, 472, figs. 1-3.
1913 B, 366, fig. 50.
Moodie, R. L. 1911 C, 377.
1912 E, 32.
1914 A, 17.
Williston, S. W. 1909 D, 122, pls. i-v.
1918 B, 110.
Permian (Clear Fork); Texas.

Diplocaulus magnicornis Cope.

Hay, O. P. 1902 A, 416.
Abel, O. 1919 A, 305, figs. 227, 228.
1920 A, 353, fig. 558.
Beede, J. W. 1907 A, 119, 139.
Broili, F. 1902 A, 537, figs. 1, 2, 3.
1904 A, 7, 8, pl. i; pl. iv, figs. 4-15; pl. v, figs. 1-4.
Case, E. C. 1902 B, 63 (This species?).
1911 B, 18, 79, 88, 91, pls. ii, iii; pl. iv, fig. 1; pl. xii, fig. 3; text-figs. 2, 21-23.
1915 A, 96, 125, text-fig. 13.
Cummins, W. F. 1908 A, 743.
Douthitt, H. 1917 B, 4, 33, figs. 1, 5, 7.
Gould, C. W. 1901 A, 339.
Jaekel, O. 1911 A, 121, fig. 135.
Moodie, R. L. 1908 E, 564, fig. 5.
1908 G, 521, figs. 9-10.
1912 E, 31, pls. i, ii.
1914 A, 17.
Phillips, W. B. 1912 A, 38.
Sternberg, C. H. 1903 E, 94.
1909 C, 240, 253, 255, fig. 34.
Williston, S. W. 1902 N, 60 (D. magnicornos).
1909 D, 122.
1918 B, 110.
Permian (Clear Fork); Texas.

Diplocaulus primigenius Mehl.

Mehl, M. G. 1921 A, 48, figs. 1, 2.
Permian; Texas.

Diplocaulus pusillus Broili.

Broili, F. 1904 A, 24, pl. vi, figs. 1-4.
Broili, F. 1902 A, 536 (Name only).
1913 A, 100.
Case, E. C. 1911 B, 22, 79, 85, text-fig. 3.
1915 A, 96, 131.
Douthitt, H. 1917 B, 4, 34.
Moodie, R. L. 1914 A, 17.
Williston, S. W. 1909 D, 122.
1910 D, 534.
1918 B, 110.
Permian (Clear Fork); Texas.

Diplocaulus salamandroides Cope.

Hay, O. P. 1902 A, 416.
Beede, J. W. 1907 A, 139.
Broili, F. 1902 A, 539.

Broili, F. 1904 A, 7.
Case, E. C. 1900 A, 710, pl. i, figs. 16, 17; pl. v, fig. 17.
1902 B, 63.
1911 B, 16.
1915 A, 96.
Cope and Matthew 1915 A, pl. iii, figs. 21-23.
Douthitt, H. 1917 B, 4, 33.
Moodie, R. L. 1912 E, 38.
Moodie, R. L. 1914 A, 17.
Williston, S. W. 1909 D, 122.
Pennsylvanian (Upper); Illinois: Permian (Wichita); Texas: (Enid); Oklahoma.

Diplocaulus sp. indet.

Phillips, W. B. 1912 A, 41. Permian (Wichita); Texas.
Wegeman, C. H. 1915 A, 26. Permian (Wichita); Oklahoma.

PLATYOPS Williston. Type *P. parvus* Williston.

Williston, S. W. 1918 B, 110.
Huene, F. 1922 G, 447.

Platyops parvus Williston.

Williston, S. W. 1918 B, 110, fig. 19.
Permian; Texas.

Suborder MICROSAURIA Cope.

Hay, O. P. 1902 A, 410.
Arldt, T. 1907 D, 277 (Microsauridæ); 636 (Microsauria); 662 (Lepospondyli).
1907 E, 204 ("aistopoden").
1909 B, 354 ("microsaurier").
1916 A, 96, 101, 143 ("mikrosaurier").
Boulenger, G. A. 1901 B, 401.
1902 F, 383.
1904 C, 480.
1917 C, 458 ("microsauriens").
Broili, F. 1904 A, 26 (Lepospondyli).
1908 E, 298 (Lepospondyli).
1913 B, 520.
Broom, R. 1904 C, 109.
Carus, V. 1875 A, 485.
Case, E. C. 1908 C, 578.
1911 B, 14, 85.
1915 A, 96.
Cope, E. D. 1891 N, 28, 29 (Microsauri).
Cunningham and Boulenger 1912 A, 174.
Depéret, C. 1907 B ("microsauriens").
Dawson, J. W. 1888 A, 393.
Dollo, L. 1884 D, 91.
Fürbringer, M. 1902 A, 217.
Gadow, H. 1901 B, 288 (Microsauri); 80 (Lepospondyli); 81 (Aistopodes).
1902 B, 359 (Microsauri).
Goodrich, E. S. 1916 A, 263.
Gregory, W. K. 1911 A, 509.
1915 D, 365 (Microsauria, Aistopoda).
1917 B, 318 (Microsauria, Aistopoda).
Gregory, W. K. 1917 B, 312 ("microsaurs").
1920 A, 224 ("microsaurs").
Huene, F. 1912 E, 472 ("mikrosaurier").
1912 F, 524 ("mikrosaurier").
1913 G, 505.
1920 C, 211.
1926 A, 262 ("mikrosaurier").
Jaekel, O. 1906 D, 189.
1909 A, 194 (Lepospondyli); 194, 205, 209 (Microsauria); 209 (Aistopodi).
1909 B, 599.
1910 C, 324.
1910 D, 123.
1911 A, 117 (Microsauria); 119 (Aistopodi).
1914 A, 203 ("mikrosaurier").
Lydekker, R. 1912 C, 15.
Mehl, M. G. 1912 C, 408.
Miner, R. W. 1925 A, 172 ("microsaurs").
Moodie, R. L. 1908 B, 363 (Microsauria, Aistopoda).
1908 F, 253 (Microsauria, Aistopoda).
1908 G, 512 (Microsauria); 516, 520 (Aistopoda).
1909 B, 15 (Microsauria); 25 (Aistopoda).
1909 C, 118, 120 (Microsauria, Aistopoda).
1909 D, 243.
1909 E, 38 (Microsauria), 39 (Aistopoda).
1909 F, 216, 220 (Microsauria, Aistopoda).
1909 G, 362.
1910 F, 234.
1911 C, 382.
1911 H, 241 (Microsauria); 243 (Aistopoda).
1912 D, 326, 327, 351 (Microsauria); 326 (Lepospondylia).
1912 E, 35.
1915 F, 190.
1915 G, 373.
1915 H, 636.
1916 A, 4, 75, 76 (Microsauria); 75 (Lepospondylia); 5, 76 (Aistopoda a syn.).
1928 B, 216.
Nopcsa, F. 1923 H, 16, 135, 148.
Perrier, E. 1920 A, 281 ("microsauriens").
Pompeckj, J. F. 1912 A, 343, 346 ("microsaurier," "aistopoden").
Romer, A. S. 1922 B, 523 (Lepospondyli).
1925 B, 461 (Lepospondylia).
Schwarz, H. 1908 A, 324 ("aistopoden"); 315 (Lepospondylia).
1908 B, 67 (Aistopoda); 79 (Microsauria); 93 (Lepospondyla).
Steinmann, G. 1908 A, 208 ("microsaurier").
Stromer, E. 1912 A, 59 (Lepospondyli).
Swinnerton and Howes 1901 A, 70.
Thevenin, A. 1906 A, 161.
1910 A, 39 ("aistopodes"); 40, 42 ("microsauriens").
Watson, D. M. S. 1914 D, 171 ("microsaurs").
Williston, S. W. 1908 B, 400.
1909 A, 393 ("microsaurs").
1909 D, 131.
1910 D, 531.
1910 F, 599 (Branchiosauria, Lepospondyli).
1912 B, 655, 658 (Microsauria); 657 (Lepospondyli).
1912 E, 258.
1916 B, 209 (Lepospondyli).

Woodward, A. S. 1910 B, 464.
1911 C, 46.
Zittel and Broili 1911 A, 162 (Lepospondyli).
1923 A, 199 (Lepospondyli).
Zittel, Eastman, etc. 1902 A, 125 (Lepospondyli).

HYLONOMIDÆ Fritsch.

Hay, O. P. 1902 A, 412.
Abel, O. 1919 A, 309.
Cope, E. D. 1891 N, 30.
Gregory, W. K. 1917 B, 313, 318.
Huene, F. 1913 G, 505.
1926 A, 262.
Jaekel, O. 1909 A, 209.
1911 A, 66.
Moodie, R. L. 1916 A, 78.
Schwarz, H. 1908 B, 102 ("hylonomiden").
Zittel and Broili 1923 A, 199.
Zittel, Eastman, etc. 1902 A, 125 (Microsauridæ).

HYLONOMUS Dawson. Type *H. lyelli* Dawson.

Hay, O. P. 1902 A, 412.
Abel, O. 1919 A, 345.
Bell, W. A. 1913 A, 341.
Boulenger, G. A. 1902 F, 383, fig. 3.
Broili, F. 1908 F, 58.
1913 B, 520.
Case, E. C. 1908 C, 578.
Depèret, C. 1912 A, 704.
Gadow, H. 1901 B, 289.
1902 B, 359, 361.
Heilprin, A. 1887 A, 310.
Huxley, T. H. 1863 C, 571.
Lydekker, R. 1903 D, 75.
Moodie, R. L. 1911 C, 383.
1915 E, 463.
1916 A, 78.
Owen, R. 1876 E, 45.
Steiner, H. 1921 A, 537.
Thevenin, A. 1906 A, 161.
Williston, S. W. 1910 A, 267.
1911 B, 54.
1912 B, 657.
Zittel and Broili 1911 A, 162.
1923 A, 172, 199, fig. 266.
Zittel, Eastman, etc. 1902 A, 125.

Hylonomus latidens Dawson.

Hay, O. P. 1902 A, 412.
Lambe, L. M. 1904 C, 35, 45 (Hylonemus).
Moodie, R. L. 1914 A, 20.
1916 A, 80, pl. x.
Pennsylvanian (Joggins); Nova Scotia.

Hylonomus lyelli Dawson.

Hay, O. P. 1902 A, 412.
Bell, W. A. 1913 A, 343.
Broili, F. 1908 F, 58.
Lambe, L. M. 1904 C, 35, 45 (Hylonemus).
Mackie, S. J. 1863 F, 439.
Moodie, R. L. 1914 A, 20.
1916 A, 79, pl. ix.
Thevenin, A. 1906 A, 161.
1910 A, 42.
Zittel and Broili 1911 A, 162, fig. 288.
Zittel, Eastman, etc. 1902 A, 125, fig. 209.
Pennsylvanian (Joggins); Nova Scotia.

Hylonomus multidens Dawson.

Hay, O. P. 1902 A, 412.
Lambe, L. M. 1904 C, 35, 45 (Holonemus).
Moodie, R. L. 1914 A, 20.
1916 A, 80.
Pennsylvanian (Joggins); Nova Scotia.

Hylonomus wymani Dawson.

Hay, O. P. 1902 A, 412.
Bell, W. A. 1913 A, 343.
Broili, F. 1908 F, 59 (H. wymanni).
Lambe, L. M. 1904 C, 35, 45 (Holonemus).
Mackie, S. J. 1863 F, 439.
Moodie, R. L. 1914 A, 20.
1916 A, 80.
Pennsylvanian (Joggins); Nova Scotia.

SMILERPETON Dawson. Type *Hylonomus aciedentatus* Dawson.

Hay, O. P. 1902 A, 413.
Moodie, R. L. 1916 A, 81.

Smilerpeton aciedentatum Dawson.

Hay, O. P. 1902 A, 413.
Bell, W. A. 1913 A, 343 (Hylonomus).
Broili, F. 1908 F, 59 (Hylonomus).
Lambe, L. M. 1904 C, 35, 45.
Moodie, R. L. 1914 A, 26.
1916 A, 81, pl. xii, fig. 18.
Pennsylvanian (Joggins); Nova Scotia.

HYLERPETON Owen. Type *H. dawsonii* Owen.

Hay, O. P. 1902 A, 413.
Broili, F. 1908 F, 58.
Gadow, H. 1896 A, 28.
1902 B, 361.
Heilprin, A. 1887 A, 310.
Huxley, T. H. 1863 C, 571.
Moodie, R. L. 1912 D, 327.
1916 A, 82.

Hylerpeton dawsonii Owen.

Hay, O. P. 1902 A, 413.
Bell, W. A. 1913 A, 343.
Lambe, L. M. 1904 C, 35, 45.
Mackie, S. J. 1863 F, 439 (H. dawsoni).
Moodie, R. L. 1914 A, 19.
1916 A, 82, pl. vii (H. dawsoni).
Pennsylvanian (Joggins); Nova Scotia.

Hylerpeton intermedium Dawson.

Hay, O. P. 1902 A, 413.
Lambe, L. M. 1904 C, 35, 45.
Moodie, R. L. 1914 A, 19.
1916 A, 83.
Pennsylvanian (Joggins) Nova Scotia.

Hylerpeton longidentatum Dawson.

Hay, O. P. 1902 A, 413.
Lambe, L. M. 1904 C, 35, 45.
Moodie, R. L. 1914 A, 19.
1916 A, 83, pl. xi.
Pennsylvanian (Joggins); Nova Scotia.

FRITSCHIA Dawson. Type *Hylerpeton curtidentatum* Dawson.

Hay, O. P. 1902 A, 413.
Moodie, R. L. 1916 A, 84.

Fritschia curtidentata Dawson.

Hay, O. P. 1902 A, 413.
Lambe, L. M. 1904 C, 35, 45.
Moodie, R. L. 1914 A, 19.
1916 A, 84, pl. viii.
Pennsylvanian (Joggins); Nova Scotia.

TUDITANIDÆ Cope.

Hay, O. P. 1902 A, 415.
Fritsch, A. 1883 A, 173 (Microbrachidæ).
Gregory, W. K. 1917 B, 313, 318.
Huene, F. 1913 G, 505 (Microbrachidæ).
Moodie, R. L. 1911 H, 241.
1916 A, 85.
Schwarz, H. 1908 B, 91 (Microbrachidæ).

TUDITANUS Cope. Type *T. punctulatus* Cope.

Hay, O. P. 1902 A, 415.
Amalitsky, V. P. 1921 A, 4.
1924 A, 52.
Broili, F. 1904 A, 27.
1908 F, 60.
Case, E. C. 1917 A, 135.
1919 B, 200.
Cope, E. D. 1885 DD, 305.
Gregory, W. K. 1915 D, 332.
Huene, F. 1912 E, 472.
Moodie, R. L. 1909 A, 347.
1909 B, 15, 16.
1916 A, 85.
Schwarz, H. 1908 B, 91.

Tuditanus brevirostris Cope.

Hay, O. P. 1902 A, 415.
Moodie, R. L. 1909 A, 356, pl. lxiv, fig. 4.
1914 A, 27.
1916 A, 88.
Pennsylvanian (Linton); Ohio.

Tuditanus longipes Cope.

Hay, O. P. 1902 A, 415.
Moodie, R. L. 1914 A, 27.
1916 A, 89, fig. 20.
Pennsylvanian (Linton); Ohio.

Tuditanus minimus Moodie.

Moodie, R. L. 1909 E, 56, fig. 10.
1909 B, 17, 23, pl. viii, fig. 2.
1911 H, 242.
1914 A, 27.
1916 A, 91.
Pennsylvanian (Cannelton); Pennsylvania.

Tuditanus punctulatus Cope.

Hay, O. P. 1902 A, 415.
Broili, F. 1904 A, 27.
Pennsylvanian (Linton); Ohio.
See *Isodectes* Cope.

Tuditanus walcotti Moodie.

Moodie, R. L. 1909 B, 16, pl. vi, figs. 1, 2; pl. vii, figs. 1, 2.
1910 A, 368.
1914 A, 27.
1915 A, 192.
1916 A, 93, fig. 21.
Villiers, C. G. S. 1922 A, 218.
Pennsylvanian (Linton); Ohio.

ERPETOSAURUS Moodie. Type *Tuditanus radiatus* Cope.

Moodie, R. L. 1909 A, 347, 348.
Case, E. C. 1917 A, 134.
1919 B, 200.
Hay, O. P. 1902 A, 415 (Tuditanus, in part).
Moodie, R. L. 1909 F, 219.
1916 A, 96, fig. 22.

Erpetosaurus acutirostris Moodie.

Moodie, R. L. 1909 A, 349, pl. lxi, fig. 1.
1914 A, 18.
1916 A, 107, fig. 22.
Pennsylvanian (Linton); Ohio.

Erpetosaurus minutus Moodie.

Moodie, R. L. 1909 B, 21, pl. viii, fig. 1.
1909 A, 347.
1914 A, 18.
1916 A, 104, pl. xx, fig. 1; text-fig. 22.
Pennsylvanian (Cannelton); Pennsylvania.

Erpetosaurus obtusus (Cope).

Hay, O. P. 1902 A, 415 (Tuditanus).
Moodie, R. L. 1909 A, 347, 350, fig. 2.
1914 A, 18.
1916 A, 98.
Pennsylvanian (Linton); Ohio.

Erpetosaurus radiatus (Cope).

Hay, O. P. 1902 A, 415 (Tuditanus).
Broili, F. 1904 A, 27 (Tuditanus).
Moodie, R. L. 1909 A, 347, pl. lxii, fig. 1.
1914 A, 18.
1916 A, 97, pl. xxv, fig. 1; text-fig. 22.
Pennsylvanian (Linton); Ohio.

Erpetosaurus sculptilis Moodie.

Moodie, R. L. 1909 E, 61, figs. 11, 12 (Tuditanus).
1909 A, 347.
1909 B, 22.
1914 A, 18.
1916 A, 105, pl. xviii, fig. 1.
Pennsylvanian (Cannelton); Pennsylvania.

Erpetosaurus tabulatus (Cope).

Hay, O. P. 1902 A, 415 (Tuditanus).
Moodie, R. L. 1908 G, 520, 522, fig. 8 (Tuditanus).
Moodie, R. L. 1909 A, 347; pl. lxii, fig. 2; text-fig. 1; 351, pl. lix, fig. 2; pl. lxiv, fig. 3 (This sp.?).
1909 B, 21.
1909 E, 52, figs. 8, 9 (Tuditanus).
1914 A, 18.
1915 B, pl. 1, fig. 1.
1916 A, 100, pl. xxv, fig. 2; text-fig. 22.
Pennsylvanian (Linton); Ohio.

Erpetosaurus tuberculatus Moodie.

Moodie, R. L. 1909 A, 348, pl. lviii.
1914 A, 18.
1916 A, 109, pl. xxvi, fig. 1.
Pennsylvanian (Linton); Ohio.

Erpetosaurus sp. indet.

Moodie, R. L. 1909 A, 352, pl. lxi, fig. 2. Carboniferous (Linton); Ohio.

ODONTERPETON Moodie. Type *O. triangularis* Moodie.

Moodie, R. L. 1909 B, 19.
Case, E. C. 1917 A, 135.
1919 B, 200.
Moodie, R. L. 1916 A, 110.

Odonterpeton triangularis Moodie.

Moodie, R. L. 1909 B, 19, pl. vi, fig. 3.
1909 F, 217.
1914 A, 23.
1916 A, 110, fig. 22.
Pennsylvanian (Linton); Ohio.

CROSSOTELIDÆ Williston.

Williston, S. W. 1909 D, 131.
Arldt, T. 1912 A, 656.
1916 A, 142 ("crossoteliden").
Case, E. C. 1911 B, 14.
1915 A, 97.
Moodie, R. L. 1912 E, 38.
Williston, S. W. 1910 D, 534.
1916 B, 210.
A family of somewhat uncertain position among the Microsauria.

CROSSOTELOS Case. Type *C. annulatus* Case.

Case, E. C. 1911 B, 14, 70.
1902 B, 63, 65.
1908 C, 579.
1915 A, 132.
Gregory, W. K. 1917 B, 312.
Moodie, R. L. 1911 C, 377.
Schuchert, C. 1910 A, 570.
Williston, S. W. 1909 D, 130.
1910 A, 271, 272, pl. xv, figs. 2, 3.
1910 D, 534.
1916 B, 211, fig. 53.

Crossotelos annulatus Case.

Case, E. C. 1902 B, 63, 65.
Beede, J. W. 1907 A, 139 (C. annulata).
Case, E. C. 1911 B, 70, text-figs. 18, 19.
1915 A, 97.
Moodie, R. L. 1914 A, 17.
Williston, S. W. 1910 D, 534.
Permian (Enid); Oklahoma.

STEGOPIDÆ Moodie.

Moodie, R. L. 1909 E, 79.
Gregory, W. K. 1917 B, 313, 317, 320.
Moodie, R. L. 1916 A, 112.
See the literature cited under *Keraterpeton.*

STEGOPS Moodie. Type *Ceraterpeton divaricatum* Cope.

Moodie, R. L. 1909 E, 79.
Case, E. C. 1917 A, 135.
1919 B, 200.
Gregory, W. K. 1917 B, 320.
1920 A, 223.
Huene, F. 1912 E, 472.
1922 G, 447.
Moodie, R. L. 1916 A, 112.

Stegops divaricata (Cope).

Hay, O. P. 1902 A, 414 (Keraterpeton).
Gregory, W. K. 1915 D, 337.
1920 A, 115, fig. 13.
Moodie, R. L. 1908 G, 520.
1909 E, 79, figs. 21, 22.
1914 A, 26.
1916 A, 113, pl. xxv, fig. 3, text-fig. 23.
Pennsylvanian; Ohio.

UROCORDYLIDÆ Lydekker.

Lydekker, R. 1889, in Nicholson and Lydekker 1889 A, 1025.
Hay, O. P. 1902 A, 414 (Ptyonidæ, part).
Arldt, T. 1909 B, 354 ("urocordyliden").
1912 A, 650.
1916 A, 142 ("urocordyliden," "diceratiden").
Gregory, W. K. 1917 B, 313, 317, 318.
Hancock and Atthey 1869 C, 182 (Urocordylus).
Huene, F. 1922 G, 446 (Nectridei).
Lydekker, R. 1890 A, 196.
Moodie, R. L. 1909 A, 357.
1916 A, 115.

DICERATOSAURUS Jaekel. Type *Tuditanus punctolineatus* Cope.

Jaekel, O. 1903 A, 112.
Abel, O. 1919 A, 255, 299.
Arldt, T. 1909 B, 354 ("diceratosauriden").
Broili, F. 1904 A, 27.
1926 A, 210.
Case, E. C. 1917 A, 134.
1919 B, 200.
Gregory, W. K. 1917 B, 318.
Huene, F. 1912 E, 472.
1922 G, 447, 453.
Jaekel, O. 1909 A, 196, 198, 210, fig. 1.
Lakjer, T. 1927 A, 192.
Moodie, R. L. 1909 A, 352, 357.
1909 E, 63.
1916 A, 115.
Nopcsa, F. 1923 E, 1052.
Stappenbeck, R. 1905 A, 402.
Watson, D. M. S. 1917 C, 170.
Williston, S. W. 1909 D, 122.
Zittel and Broili 1911 A, 164.
See also the literature cited under *Keraterpeton.*

Diceratosaurus punctolineatus (Cope).

Hay, O. P. 1902 A, 414 (Keraterpeton).
Abel, O. 1919 A, 300, fig. 224.
Baird, S. F. 1876 A, cci (Ceraterpeton).
Broili, F. 1904 A, 27 (C. "lennicorne" a syn.).
1926 A, 209, fig. 6.
Fuchs, H. 1909 B, 115, fig. 3.
1920 A, 363.
Hay, O. P. 1902 A, 415 (Tuditanus mordax).
Jaekel, O. 1903 A, 112, pls. ii-v (Ceraterpeton recticorne a syn.).
1903 F, 30, fig. 2.
1909 B, 600, fig. 10.
1911 A, 120, figs. 133, 134.
1915 A, 101, 112, fig. 6.
Moodie, R. L. 1908 G, 536.
1909 A, 356, pl. lxv (D. punctolineatus); pl. lxiv, fig. 2 (Tuditanus mordax).
1909 B, 22, 25.
1914 A, 17.
1916 A, 116, pl. xiv, fig. 4; pl. xv; pl. xvi, figs. 1, 5; pl. xxii, fig. 5.
Newberry, J. S. 1874 G, 179 ("Keraterpeton").
Watson, D. M. S. 1913 F, 959.
Pennsylvanian (Linton); Ohio.

Diceratosaurus lævis Moodie.

Moodie, R. L. 1909 E, 63, figs. 13, 14.
1914 A, 17.
1915 B, pl. l, fig. 2 (Erpetosaurus).
1916 A, 120, fig. 24.
Pennsylvanian (Linton); Ohio.

Diceratosaurus robustus Moodie.

Moodie, R. L. 1909 E, 67, fig. 15.
1909 A, 355, pl. lxiii, fig. 2.
1914 A, 17.
1916 A, 122, fig. 24.
Pennsylvanian (Linton); Ohio.

EOSERPETON Moodie. Type *Ceraterpeton tenuicorne* (Cope).

Moodie, R. L. 1909 E, 76.
Case, E. C. 1917 A, 134.
1919 B, 200.
Huene, F. 1912 E, 472.
1922 G, 447.
Moodie, R. L. 1909 A, 355, pl. lxiii, fig. 1.
1916 A, 123.
See also the literature cited under *Keraterpeton.*

Eoserpeton tenuicorne (Cope).

Hay, O. P. 1902 A, 414 (Keraterpeton).
Broili, F. 1904 A, 27 (Ceraterpeton "lennicorne," syn. of C. punctolineatum).
Gregory, W. K. 1917 B, 319.
Jaekel, O. 1903 A, 112 (C. "recticorne," syn. of Diceratosaurus punctolineatus).
Merrill, G. P. 1907 A, 12 (Keraterpeton).
Moodie, R. L. 1909 A, pl. lxiii, fig. 1.
1909 B, 23.
1909 E, 76, fig. 20.
1914 A, 18.
1916 A, 123, fig. 25.
Woodward, A. S. 1897 D, 298 (Keraterpeton).
Pennsylvanian (Linton); Ohio.

KERATERPETON Huxley. Type *K. galvani* Huxley.

Hay, O. P. 1902 A, 414.
Abel, O. 1912 F, 218 (Ceraterpeton).
1919 A, 298 (Ceraterpeton).
Arldt, T. 1916 A, 100.
Baird, S. F. 1876 A, cci, 308 (Ceraterpeton).
Broili, F. 1905 A, 13 (Ceraterpeton).
1908 F, 60.
Cope, E. D. 1880 U, 144 (Ceraterpeton).
Cunningham and Boulenger 1912 A, 171.
Depéret, C. 1912 A, 704.
Etheridge, R. 1866 A, 4.
Gadow, H. 1896 A, 23.
1901 B, 288.
Geol. Magazine 1912 A, 519 (Ceraterpeton).

Gill, T. 1881 A, 388 (Ceraterpeton).
Gregory, W. K. 1915 D, 332 (Ceraterpeton).
1917 B, 318.
Hancock and Atthey 1869 C, 184.
Howes, G. B. 1902 A, 525.
Huene, F. 1922 G, 447 (Ceraterpeton).
Hutchinson, H. N. 1910 A, 100, fig. 22 (Ceraterpeton).
Huxley, T. H. 1871 A, 183, pl. xvii.
Jaekel, O. 1903 A, 109 (Ceraterpeton).
1909 A, 210 (Ceraterpeton).
Moodie, R. L. 1915 G, 374 (Ceraterpeton).
1908 G, 520, fig. 7 (Ceraterpeton).
Sewertzoff, A. N. 1908 A, 359 (Ceraterpeton).
Schmalhausen, J. 1917 A, 106 (Ceraterpeton).
Thevenin, A. 1910 A, 40.
Watson, D. M. S. 1913 F, 958 (Ceraterpeton).
1916 E, 86 (Ceraterpeton).
Williston, S. W. 1908 B, 400 (Ceraterpeton).
Woodward, A. S. 1897 D, 293, pl. xii (Ceraterpeton).
Zittel and Broili 1911 A, 164.
Zittel, Eastman, etc. 1902 A, 126.

The American species formerly referred to this genus have become each the type of a new genus, *Stegops*, *Eoserpeton*, and *Diceratosaurus*.

AMPHIBAMIDÆ Moodie.

Moodie, R. L. 1910 C, 233.
Gregory, W. K. 1917 B, 313, 317, 319.
Moodie, R. L. 1911 H, 241.
1912 D, 326.
1916 A, 126.

AMPHIBAMUS Cope. Type *A. grandiceps* Cope.

Hay, O. P. 1902 A, 411.
Arldt, T. 1916 A, 98.
Cope, E. D. 1885 DD, 305.
Huene, F. 1912 E, 472.
Moodie, R. L. 1909 E, 40.
1912 D, 327.
1916 A, 126.
Osborn, H. F. 1916 E, 613, fig. 24.
1917 B, 178, 179, fig.
Sewertzoff, A. N. 1908 A, 359.
Steiner, H. 1921 A, 535.
Zittel and Broili 1911 A, 163.
1923 A, 200.

Amphibamus grandiceps Cope.

Hay, O. P. 1902 A, 411.
Andreæ, A. 1903 B, 442.
Eastman, C. R. 1902 B, 97.
1902 G, 541.
Huene, F. 1913 G, 502, fig. 2 (Amphibamas).
Hutchinson, H. N. 1910 A, 102, fig. 24.
Moodie, R. L. 1908 E, 564, fig. 3.
Moodie, R. L. 1909 E, 40, 82, fig. 24.
1909 F, 218, fig. 1.
1910 A, 368.
1910 C, 233.
1911 H, 242, pl. iii.
1912 A, 277.
1912 D, 324, 326, 343, pl. i, figs. 1, 2; pl. v, fig. 3; pl. vii, fig. 1; pls. xi-xiii.
1914 A, 14.
1915 A, 192.
1916 A, 127, pl. iii, fig. 7; pl. iv, figs. 5, 6; pl. xiv, figs. 1, 2; text-figs. 26-28.
Woodward, A. S. 1897 C, 378.
Pennsylvanian (Mazon Creek); Illinois.

Amphibamus thoracatus Moodie.

Moodie, R. L. 1911 B, 431, fig. 2.
1912 A, 277.
1912 D, 326, 347, pl. v, fig. 2.
1914 A, 14.
1916 A, 131.
Pennsylvanian (Mazon Creek); Illinois.

CEPHALERPETON Moodie. Type *C. ventriarmatum* Moodie.

Moodie, R. L. 1912 D, 327, 349.
1916 A, 132.
Moodie, R. L. 1912 A, 278.
1914 A, 16.
1916 A, 133, pl. iv, fig. 4; text-fig. 29.
Pennsylvanian (Mazon Creek); Illinois.

Cephalerpeton ventriarmatum Moodie.

Moodie, R. L. 1912 D, 326, 350, pl. i, fig. 4; pl. vii, fig. 2.

NYRANIIDÆ Lydekker.

Lydekker, R. 1890 A, 166.
Fritsch, A. 1889 B (1885), 33 (Nyrania).
Moodie, R. L. 1916 A, 135.

ICHTHYERPETON Huxley. Type *I. bradleyæ* Huxley.

Huxley, T. 1866, in Wright and Huxley 1866 A, 168.
Arldt, T. 1916 A, 100.
Etheridge, R. 1866 A, 4.
Gregory, W. K. 1917 B, 313.
Huxley, T. 1867 B, 367 (Ichthyerpeton); 369 (Erpetocephalus).
Lydekker, R. 1890 A, 168 (Ichthyerpetum).
Moodie, R. L. 1916 A, 135.
Zittel, K. A. 1890 A, 381 (Ichthyerpeton, Erpetocephalus).

Ichthyerpeton squamosum Moodie.

Moodie, R. L. 1909 E, 69.
Gregory, W. K. 1917 B, 320.
Moodie, R. L. 1909 B, 24.
1914 A, 20.
1916 A, 135.
Pennsylvanian (Linton); Ohio.

CERCARIMORPHUS Cope. Type *C. parvisquamis* Cope.

Hay, O. P. 1902 A, 417.
Case, E. C. 1917 A, 134.
1919 B, 200.
Gregory, W. K. 1917 B, 313, 319.
Moodie, R. L. 1915 E, 463.
1916 A, 137.

Cercarimorphus parvisquamis Cope.

Hay, O. P. 1902 A, 417.
Moodie, R. L. 1914 A, 16.
1916 A, 137, pl. xxi, figs. 3, 4; pl. xxiv, figs. 2, 3.
Pennsylvanian (Linton); Ohio.

PTYONIIDÆ Cope.

Hay, O. P. 1902 A, 414.
Abel, O. 1919 A, 304.
Broili, F. 1905 A, 14 (Ceraterpetontidæ).
Gregory, W. K. 1917 B, 313, 317, 319.
Huene, F. 1913 G, 505 (Ptyonidæ).
Huene, F. 1920 C, 211 (Ptyonidæ).
1926 A, 262 (Ptyonidæ).
Moodie, R. L. 1916 A, 139.
Schwarz, H. 1908 A, 324 ("ptyoniden").
1908 B, 79 (Ptyonidæ).

PTYONIUS Cope. Type *P. pectinatus* Cope.

Hay, O. P. 1902 A, 414.
Arldt, T. 1916 A, 101.
Broili, F. 1908 F, 59.
Case, E. C. 1917 A, 135.
1919 B, 200.
Cope, E. D. 1885 DD, 305.
Gregory, W. K. 1917 B, 319.
Hutchinson, H. N. 1910 A, 103, pl. viii.
Jaekel, O. 1903 A, 134.
1909 A, 207, fig. 13.
Moodie, R. L. 1908 F, 255.
1908 G, 520.
1909 B, 24.
1909 C, 120.
1909 E, 38.
1916 A, 139, fig. 30.
1920 B, 469, fig. 5 ("creature").
Osborn, H. F. 1916 E, 613, fig. 24.
1917 B, 179, fig.
Schwarz, H. 1908 B, 82.
Watson, D. M. S. 1913 F, 959.
1917 C, 170.
Zittel, Eastman, etc. 1902 A, 126 (Syn. of Urocordylus).

Ptyonius marshii Cope.

Hay, O. P. 1902 A, 414.
Moodie, R. L. 1914 A, 25.
1916 A, 141.
Pennsylvanian (Linton); Ohio.

Ptyonius nummifer Cope.

Hay, O. P. 1902 A, 414.
Moodie, R. L. 1909 A, 356, pl. lxiii, fig. 3 (P. mummifer, *errore*).
1909 B, 25.
1914 A, 25.
1915 B, pl. l, fig. 4.
1916 A, 142.
Pennsylvanian (Linton); Ohio.

Ptyonius pectinatus Cope.

Hay, O. P. 1902 A, 414.
Abel, O. 1919 A, 230, figs. 179, 180.
1921 A, 298, fig. 112.
Moodie, R. L. 1909 B, 24, 25, pl. viii, fig. 3.
1914 A, 25.
1916 A, 139, pl. xx, fig. 2.
Schwarz, H. 1908 B, 82, figs. 23, 24, 26.
Pennsylvanian (Linton); Ohio.

Ptyonius serrula Cope.

Hay, O. P. 1902 A, 415.
Moodie, R. L. 1914 A, 25.
1916 A, 142.
Pennsylvanian (Linton); Ohio.

Ptyonius vinchellianus Cope.

Hay, O. P. 1902 A, 415.
Abel, O. 1919 A, 229, fig. 178.
1921 A, 305, fig. 118.
Moodie, R. L. 1914 A, 25.
1916 A, 141.
Schwarz, H. 1908 B, 82, fig. 27 (This species?).
Pennsylvanian (Linton); Ohio.

ŒSTOCEPHALUS Cope. Type *O. amphiuminus* Cope = *O. remex* Cope.

Hay, O. P. 1902 A, 414.
Abel, O. 1921 A, 298.
Arldt, T. 1916 A, 101.
Broili, F. 1908 F, 59.
Case, E. C. 1915 A, 132 (Osteocephalus).
1917 A, 135.
1919 B, 200.
Cope, E. D. 1880 U, 144.
1885 DD, 305.
Gill, T. 1881 A, 388.
Gregory, W. K. 1917 B, 319.
Moodie, R. L. 1908 F, 255.
1909 F, 219.
1916 A, 143, fig. 31.
1920 B, 468, fig. 5 ("creature").
Schwarz, H. 1908 B, 82, 86.
Watson, D. M. S. 1917 C, 170.
Zittel, Eastman, etc. 1902 A, 126 (Syn. of Urocordylus).

Œstocephalus rectidens Cope.

Hay, O. P. 1902 A, 414.
Moodie, R. L. 1914 A, 23.
1916 A, 145.
Pennsylvanian (Linton); Ohio.

Œstocephalus remex Cope.

Hay, O. P. 1902 A, 414.
Abel, O. 1919 A, 229, fig. 177.
Moodie, R. L. 1909 B, 27.

Moodie, R. L. 1914 A, 23.
1916 A, 143.

Schwarz, H. 1908 B, 87, figs. 29, 30.
Pennsylvanian (Linton); Ohio.

THYRSIDIUM Cope. Type *T. fasciculare* Cope.

Hay, O. P. 1902 A, 416.
Arldt, T. 1916 A, 101.
Case, E. C. 1917 A, 135.
1919 B, 200.
Moodie, R. L. 1916 A, 145.
Schwarz, H. 1908 B, 70.
Zittel and Broili 1911 A, 166 (Tyrsidium).

Thyrsidium fasciculare Cope.

Hay, O. P. 1902 A, 416.
Abel, O. 1919 A, 226, 304, fig. 225.
Moodie, R. L. 1909 B, 27.
1914 A, 27.
1916 A, 146.
Schwarz, H. 1908 B, 70, figs. 5-9.
Pennsylvanian (Linton); Ohio.

ICHTHYCANTHIDÆ Moodie.

Moodie, R. L. 1916 A, 171.

Gregory, W. K. 1917 B, 313, 319.

ICHTHYCANTHUS Cope. Type *I. ohiensis* Cope.

Hay, O. P. 1902 A, 422.
Case, E. C. 1911 B, 30.
1917 A, 134.
1919 B, 200.
Moodie, R. L. 1915 A, 509.
1916 A, 171.
Romer, A. S. 1922 B, 564.

Ichthycanthus ohiensis Cope.

Hay, O. P. 1902 A, 422.
Moodie, R. L. 1911 E, 240.
1914 A, 20.
1915 A, 509.

Moodie, R. L. 1916 A, 171.
Pennsylvanian (Linton); Ohio.

Ichthycanthus platypus Cope.

Hay, O. P. 1902 A, 422 (Eryops?).
Case, E. C. 1911 B, 30 (Eryops?).
Moodie, R. L. 1911 E, 240 (Eryops).
1914 A, 19 (To Eryops?).
1915 A, 509, fig. 2.
1915 C, 34.
1916 A, 172, pl. xxiii, fig. 1.
Pennsylvanian (Linton); Ohio.

MOLGOPHIDÆ Cope.

Hay, O. P. 1902 A, 411.
Abel, O. 1919 A, 307 (Phlegethontiidæ, Molgophidæ).
Arldt, T. 1912 A, 650.
1916 A, 101, 143 ("molgophiden").
Gregory, W. K. 1917 B, 313, 317, 319.
Huene, F. 1913 G, 505 (Molgophidæ, Phlegethontiidæ).
1920 C, 211 (Molgophidæ, Phlegetontidæ).
Jaekel, O. 1909 A, 209.
Kingsley, J. S. 1902 B, 327 (Aistopoda).
Moodie, R. L. 1912 D, 326.
1916 A, 147.
Schwarz, H. 1908 B, 73 (Molgophidæ); 74 (Phlegethontiidæ).
Zittel and Broili 1911 A, 165 (Aistopodidæ).
Zittel, Eastman, etc. 1902 A, 127 (Aistopodidæ).

MOLGOPHIS Cope. Type *M. macrurus* Cope.

Hay, O. P. 1902 A, 412.
Broili, F. 1908 E, 298.
1908 F, 59.
Case, E. C. 1917 A, 134.
1919 B, 200.
Jaekel, O. 1903 A, 134.
Moodie, R. L. 1908 F, 255.
1909 B, 27.
1909 E, 38.
1916 A, 147.
Schwarz, H. 1908 B, 73, figs. 10, 11.
Zittel and Broili 1911 A, 166.
1923 A, 203.

Molgophis brevicostatus Cope.

Hay, O. P. 1902 A, 412.
Moodie, R. L. 1909 B, 27.
1914 A, 23.

Moodie, R. L. 1916 A, 148, fig. 32.
Schwarz, H. 1908 B, 73.
Pennsylvanian (Linton); Ohio.

Molgophis macrurus Cope.

Hay, O. P. 1902 A, 412.
Moodie, R. L. 1908 F, 254.
1911 H, 242.
1914 A, 23.
1916 A, 147.
Pennsylvanian (Linton); Ohio.

Molgophis wheatleyi Cope.

Hay, O. P. 1902 A, 412.
Moodie, R. L. 1914 A, 23.
1915 B, pl. I, fig. 3.
1916 A, 149.
Pennsylvanian (Linton); Ohio.

ERPETOBRACHIUM Moodie. Type *E. mazonensis* Moodie.

Moodie, R. L. 1912 D, 353.
1916 A, 150.

Erpetobrachium mazonensis Moodie.

Moodie, R. L. 1912 D, 326, 353, pl. ii, fig. 2; pl. viii, fig. 3.
1912 A, 278.
1916 A, 150, pl. iii, fig. 3; text-fig. 15.
Pennsylvanian (Mazon Creek); Illinois.

PLEUROPTYX Cope. Type *P. clavatus* Cope.

Hay, O. P. 1902 A, 417.
Case, E. C. 1917 A, 135.
1919 B, 200.
Moodie, R. L. 1909 B, 27.
1916 A, 151.
Schwarz, H. 1908 B, 73.

Pleuroptyx clavatus Cope.

Hay, O. P. 1902 A, 417.
Baird, S. F. 1876 A, cc.
Moodie, R. L. 1909 B, 27.
1914 A, 25.
1916 A, 151, fig. 33.
Udden, J. A. 1902 B, 121.
Pennsylvanian (Linton); Ohio, Iowa.

PHLEGETHONTIA Cope. Type *P. linearis* Cope.

Hay, O. P. 1902 A, 411.
Abel, O. 1919 A, 234, 307, fig. 182.
1921 A, 298 ("phlegothontiiden").
Broili, F. 1908 E, 298.
1908 F, 59.
Case, E. C. 1917 A, 135.
1919 B, 200.
Cope, E. D. 1885 DD, 305.
Moodie, R. L. 1908 F, 255.
1916 A, 153.
Schwarz, H. 1908 B, 74.
Zittel and Broili 1911 A, 166.
1923 A, 203.

Phlegethontia linearis Cope.

Hay, O. P. 1902 A, 411.

Abel, O. 1919 A, 230, fig. 182.
1921 A, 298, fig. 111.
Cope, E. D. 1885 DD, 305.
Moodie, R. L. 1914 A, 24.
1916 A, 154.
Schwarz, H. 1908 B, 74, figs. 12, 13.
Pennsylvanian (Linton); Ohio.

Phlegethontia serpens Cope.

Hay, O. P. 1902 A, 411.
Moodie, R. L. 1914 A, 24.
1916 A, 154.
Schwarz, H. 1908 B, 74.
Pennsylvanian (Linton); Ohio.

SAUROPLEURIDÆ Hay.

Hay, O. P. 1902 A, 419.
Gregory, W. K. 1917 B, 313, 318.
Moodie, R. L. 1911 A, 489.
1916 A, 155.

SAUROPLEURA Cope. Type *S. digitata* Cope.

Hay, O. P. 1902 A, 419.
Broili, F. 1908 F, 59.
Case, E. C. 1917 A, 135.
1919 B, 200.
Cope, E. D. 1885 DD, 305.
Gregory, W. K. 1917 B, 319.
Moodie, R. L. 1909 A, 355, pl. lx, fig. 1.
1909 B, 15.
1914 A, 14.
1916 A, 155.
Steiner, H. 1921 A, 537.

Sauropleura digitata Cope.

Hay, O. P. 1902 A, 419.
Moodie, R. L. 1914 A, 26.
1916 A, 157, pl. xx, fig. 4.
Pennsylvanian (Linton beds); Ohio.

Sauropleura enchodus (Cope).

Hay, O. P. 1902 A, 423 (Anisodexis).
Moodie, R. L. 1911 E, 240 (Anisodexis?)
1914 A, 14 (Sauropleura?).
1916 A, 162, pl. xvi, fig. 4.
Pennsylvanian (Linton beds); Ohio.

Sauropleura foveata (Cope).

Hay, O. P. 1902 A, 419.
Moodie, R. L. 1916 A, 161.
Pennsylvanian (Linton); Ohio.

Sauropleura longidentata Moodie.

Moodie, R. L. 1909 E, 74, figs. 18, 19.
1914 A, 26.
1916 A, 160, pl. xvi, figs. 2, 3.
Pennsylvanian (Linton); Ohio.

Sauropleura newberryi Cope.

Hay, O. P. 1902 A, 419.
Moodie, R. L. 1914 A, 26.
1916 A, 158.
Pennsylvanian (Linton); Ohio.

Sauropleura pauciradiata Cope.

Hay, O. P. 1902 A, 419.
Moodie, R. L. 1916 A, 158, fig. 34.
Pennsylvanian (Linton); Ohio.

Sauropleura scutellata (Newb.).

Hay, O. P. 1902 A, 419.
Moodie, R. L. 1909 A, 355.
1909 B, 26.
Moodie, R. L. 1914 A, 26.
1916 A, 156, pl. xiv, fig. 3; pl. xxi, fig. 5
Pennsylvanian (Linton); Ohio.

CTENERPETON Cope. Type *C. alveolatum* Cope.

Hay, O. P. 1902 A, 415.
Case, E. C. 1917 A, 134.
1919 B, 200.
Gregory, W. K. 1917 B, 315, 319.
Moodie, R. L. 1909 B, 15.
1916 A, 166.

Ctenerpeton alveolatum Cope.

Hay, O. P. 1902 A, 415.
Merrill, G. P. 1907 A, 9.
Moodie, R. L. 1909 B, 24, pl. x.
1914 A, 17.
1916 A, 166, pl. xix; pl. xxiii, fig. 2.
Pennsylvanian (Linton); Ohio.

SAURERPETON Moodie. Type *Sauropleura latithorax* Cope.

Moodie, R. L. 1909 E, 80.
Case, E. C. 1919 B, 200.
Moodie, R. L. 1909 B, 15.
1916 A, 162.

Saurerpeton latithorax (Cope).

Hay, O. P. 1902 A, 419 (Sauropleura).
Merrill, G. P. 1907 A, 77 (Sauropleura).
Moodie, R. L. 1909 B, 23, pl. lx.
1909 E, 80, fig. 23.
1914 A, 26.
1916 A, 163, pl. xvii; text-fig. 35.
1920 B, 467, fig. 4 ("fellow").
Pennsylvanian (Linton); Ohio.

LEPTOPHRACTUS Cope. Type *L. obsoletus* Cope.

Hay, O. P. 1902 A, 419.
Case, E. C. 1917 A, 134.
1919 B, 200.
Gregory, W. K. 1917 B, 319.
Moodie, R. L. 1916 A, 167.

Leptophractus dentatus Moodie.

Moodie, R. L. 1916 A, 169, fig. 36.
1914 A, 21 (Name only).
Pennsylvanian (Linton); Ohio.

Leptophractus lineolatus Cope.

Hay, O. P. 1902 A, 419.
Moodie, R. L. 1914 A, 21.
1916 A, 169, pl. xxii, fig. 1.
Pennsylvanian (Linton); Ohio.

Leptophractus obsoletus Cope.

Hay, O. P. 1902 A, 419.
Moodie, R. L. 1914 A, 21.
1916 A, 167.
Pennsylvanian (Linton); Ohio.

SEVEN SUPPOSED MICROSAURIAN GENERA WHOSE RELATIONSHIPS ARE UNCERTAIN

EURYTHORAX Cope. Type *E. sublævis* Cope.

Hay, O. P. 1902 A, 416.
Case, E. C. 1917 A, 134.
1919 B, 200.
Hussakof, L. 1916 A, 127 (=? Sagenodus).
This genus may belong among the fishes.

Eurythorax sublævis Cope.

Hay, O. P. 1902 A, 416.
Hussakof, L. 1916 A, 127 (Sagenodus).
Moodie, R. L. 1914 A, 19.
1916 A, 170, fig. 37.
Pennsylvanian (Linton); Ohio.

AROTUS Cope. Type *Ceratodus hieroglyphus* Cope.

Cope, E. D. 1877 G, 554.
Moodie, R. L. 1908 F, 252.

Arotus hieroglyphus (Cope).

Hay, O. P. 1902 A, 356 (Ceratodus).
Bowen, C. F. 1915 A, 118, 149, 150 (Ceratodus).
Cockerell, T. D. A. 1908 C, 162 (Ceratodus).
Cope, E. D. 1877 G, 554.
Hatcher, J. B. 1905 B, 68 (Ceratodus).
Hussakof, L. 1908 A, 51 (Ceratodus)
Moodie, R. L. 1908 F, 252, fig. 3 (Ceratodus. Referred to the Amphibia).
Osborn, H. F. 1902 I, 11 (Ceratodus).
Upper Cretaceous (Judith River); Montana.

SCAPHERPETON Cope. Type *S. tectum* Cope.

Hay, O. P. 1902 A, 424.
Abel, O. 1919 A, 330.
Arldt, T. 1916 A, 103.
Cope, E. D. 1880 U, 148.
Gilmore, C. W. 1924 A, 68.
Hatcher, J. B. 1905 B, 70.
Hay, O. P. 1910 B, 296.
Moodie, R. L. 1908 F, 255.
Peale, A. C. 1912 A, 746.
Pompeckj, J. F. 1912 A, 340.
Williston, S. W. 1900 B, 394, pl. xxiv, figs. 13, 13*a*.
Zittel and Broili 1923 A, 206.

Scapherpeton excisum Cope.

Hay, O. P. 1902 A, 424.
Bowen, C. F. 1915 A, 120.
Hatcher, J. B. 1905 B, 70.
Moodie, R. L. 1908 F, 253.
1914 A, 26.
Osborn, H. F. 1902 I, 11.
Upper Cretaceous (Judith River); Montana.

Scapherpeton favosum Cope.

Hay, O. P. 1902 A, 424.
Bowen, C. F. 1915 A, 120.
Hatcher, J. B. 1905 B, 70.
Moodie, R. L. 1908 F, 253.
1914 A, 26.
Osborn, H. F. 1902 I, 11.
Upper Cretaceous (Judith River); Montana.

Scapherpeten laticolle Cope.

Hay, O. P. 1902 A, 424.
Bowen, C. F. 1915 A, 120.
Hatcher, J. B. 1905 B, 70.
Moodie, R. L. 1908 F, 253.
1914 A, 26.
Osborn, H. F. 1902 I, 11.
Upper Cretaceous (Judith River); Montana.

Scapherpeton tectum Cope.

Hay, O. P. 1902 A, 424.
Bowen, C. F. 1901 A, 120, 148.
Brown, B. 1907 A, 842.
1914 E, 358, 378.
Gilmore, C. W. 1924 D, 27.
Hatcher, J. B. 1903 D, 372.
1905 B, 69, 70.
Lambe, L. M. 1902 A, 31, pl. iii, figs. 4-8; pl. xv, figs. 16, 17?.
1904 C, 22, 36, 46.
1912 A, 8.
Matthew, W. D. 1916 A, 485 (This species?).
Moodie, R. L. 1908 F, 253.
1914 A, 26.
Osborn, H. F. 1902 I, 11, 16.
Peale, A. C. 1912 A, 754.
Sternberg, C. M. 1924 A, 68.
Williston, S. W. 1902 K, 953.
Upper Cretaceous (Judith River, Hell Creek); Montana: (Belly River); Alberta: (Lance); Wyoming; Saskatchewan.

HEMITRYPUS Cope. Type *H. jordanianus* Cope.

Hay, O. P. 1902 A, 424.
Arldt, T. 1916 A, 103.
Pompeckj, J. F. 1912 A, 340.

Hemitrypus jordanianus Cope.

Hay, O. P. 1902 A, 424.
Bowen, C. F. 1915 A, 120.
Hatcher, J. B. 1905 B, 71.
Moodie, R. L. 1908 F, 253.
1914 A, 19.
Osborn, H. F. 1902 I, 11.
Upper Cretaceous (Judith River); Montana.

AMBLYODON Dawson. Type *A. problematicum* Dawson.

Hay, O. P. 1902 A, 416.
Moodie, R. L. 1916 A, 176, fig. 38.

Amblyodon problematicum Dawson.

Hay, O. P. 1902 A, 416 (A. problematicus).
Lambe, L. M. 1904 C, 35, 45 (A. problematicus).
Moodie, R. L. 1914 A, 14 (A. problematicus).
1916 A, 177.
Pennsylvanian; Nova Scotia.

BRACHYDECTES Cope. Type *B. newberryi* Cope.

Hay, O. P. 1902 A, 413.
Case, E. C. 1917 A, 134.
1919 B, 200.
Moodie, R. L. 1916 A, 175.

Brachydectes newberryi Cope.

Hay, O. P. 1902 A, 413.
Moodie, R. L. 1914 A, 15.
1916 A, 175.
Pennsylvanian (Linton); Ohio.

PROTERPETON Moodie. Type *P. gurleyi* Moodie.

Moodie, R. L. 1916 A, 176.
This genus may belong among the fishes.

Proterpeton gurleyi Moodie.

Moodie, R. L. 1916 A, 176, pl. xxii, fig. 2.
1914 A, 25 (No description).
Pennsylvanian; Illinois.

Suborder GANOCEPHALA Owen.

Owen, R. 1860 A, 155.
Hay, O. P. 1902 A, 417 (Apœcospondyli, part).
Abel, O. 1920 A, 352 (Rhachitomi).
Arldt, T. 1907 D, 652 (Embolomeri); 684 (Temnospondyli.
1916 A, 95 ("sklerokephalen," "ganokephalen," "embolomeren," "rachitomen").
Boulenger, G. A. 1902 F, 383 (Rhachitomi).
Broili, F. 1904 A, 37 (Temnospondyli).
Broom, R. 1910 A, 214 (Temnospondyli).
Case, E. C. 1911 B, 14, 23, 80 (Temnospondyli).
1915 A, 96 (Temnospondyli).
Cope, E. D. 1885 DD, 304 (Ganocephala, Rhachitomi, Embolomeri).
1891 N, 28, 29 (Ganocephali, Rhachitomi, Embolomeri).

Dollo, L. 1884 D, 86 (Rhachitomi, Embolomeri).
1885 D, 629 (Archegosaurus).
Fürbringer, M. 1902 A, 217 (Rhachitomi, Embolomeri).
Gadow, H. 1901 B, 81 (Temnospondyli).
Gaudry, A. 1876 A, 721 (Actinodon).
1878 A, 956 ("reptiles").
Gaupp, E. 1912 A, 565 (Temnospondyli).
Geinitz and Deichmüller 1882 B, 21 (Archegosaurus).
Greene, J. R. 1861 A, 218, 226.
Gregory, W. K. 1915 D, 365 (Temnospondyli).
Haeckel, E. 1868 A, 448.
Huene, F. 1902 A, 14, 68 (Temnospondyli).
1913 B, 379 (Temnospondyli).
1913 G, 506 (Temnospondyli).
1920 C, 211 (Rhachitomi, Embolomeri).
1926 A, 262 (Temnospondyli, Embolomeri).
Jaekel, O. 1896 C, 505 (Archegosaurus).
1904 B, 115 (Temnospondyli).
1906 D, 189 (Temnospondyli).
1909 A, 194 (Temnospondyli).
Lydekker, R. 1885 F, 1-16, pls. i-iv ("labyrinthodonts").
Makowsky, A. 1876 A, 155 (Archegosaurus).
Moodie, R. L. 1908 B, 363 (Temnospondyli).
1908 G, 516, 520 (Temnospondylia).
1909 D, 243 (Temnospondylia, Embolomeri).
1909 E, 39 (Temnospondyli).
1909 F, 220 (Temnospondylia).
1910 C, 234 (Temnospondylia); 241 (Embolomeri).
1911 A, 489 (Apœcospondyli).
1911 E, 236, 240, 242 (Temnospondylia).
1911 H, 243 (Temnospondylia, Embolomeri).
1912 D, 326 (Temnospondylia, Embolomeri).
1915 F, 189, 190 (Temnospondylia).
1915 H, 638 (Temnospondylia).
Moodie, R. L. 1916 A, 5, 178 (Temnospondylia).
Owen, R. 1866 A, 14.
Quenstedt, F. A. 1861 A, 204 (Archegosaurus).
Romer, A. S. 1922 B, 523 (Embolomeri, Rachitomi).
1925 A, 180 (Embolomeri).
1925 B, 456, 461 (Embolomeri); 460 (Rhachitomi).
Stensiö, E. A. 1921 A, 140 (Temnospondyli).
Sushkin, P. P. 1927 A, 270, 310 (Rhachitomi); 316 (Embolomeri).
Terra, P. 1911 A, 225.
Thevenin, A. 1910 A, 4, 16 ("temnospondyles").
Vogt, C. 1854 A, 676 (Archegosaurus).
Watson, D. M. S. 1916 C, 632 ("temnospondyls").
1917 C, 168 (Embolomeri, Rhachitomi).
1919 A, 286, 291 ("temnospondyls"); 286, 292 (Embolomeri, Rhachitomi).
1919 B, 3, 49, 50, 62, 64 (Labyrinthodontia, Embolomeri, Rachitomi).
1926 A, 192 (Rhachitomi, Embolomeri).
Williston, S. W. 1908 B, 400 (Temnospondyli).
1910 D, 534 (Temnospondyli, Embolomeri).
1911 B, 9 (Temnospondyli).
1916 B, 200 (Temnospondyli); 208 (Embolomeri).
1918 A, 75 (Temnospondyli).
1925 A, 1, 6, 21, 25, 27, 112, 195 (Temnospondyli).
Zittel, K. A. 1890 A, 384 (Temnospondyli).
Zittel and Broili 1911 A, 166 (Temnospondyli, Rhachitomi).
1923 A, 173, 186 (Temnospondyli); 186 (Embolomeri); 187 (Rhachitomi).
Zittel, Eastman, etc. 1902 A, 128 (Temnospondyli).

CRICOTIDÆ Cope.

Hay, O. P. 1902 A, 420.
Abel, O. 1919 A, 293.
Arldt, T. 1912 A, 656.
1916 A, 142 ("cricotiden").
Case, E. C. 1911 B, 14, 72, 81, 84.
1915 A, 97.
1915 D, 797.
Cope, E. D. 1891 N, 30.
Gregory, W. K. 1917 B, 313.
Huene, F. 1913 G, 507.
1920 C, 211.
1926 A, 262, 267 (Embolomeri).
Jaekel, O. 1922 A, 25.
Moodie, R. L. 1911 E, 241.
1912 D, 326.
1916 A, 178.
Watson, D. M. S. 1917 C, 169.
Williston, S. W. 1910 D, 534.
1916 B, 208.

CRICOTUS Cope. Type *C. heteroclitus* Cope.

Hay, O. P. 1902 A, 420.
Abel, O. 1919 A, 225, 293, **fig. 174.**
Arldt, T. 1916 A, 99, 103.
Beede, J. W. 1922 A, 682.
Broili, F. 1904 A, 46, 48.
1908 D, 240.
1913 A, 98.
Broom, R. 1910 A, 214.
1910 C, 476.
1913 F, 563, 564.
Case, E. C. 1900 A, 698.
1908 C, 579.
1911 B, 14, 72, 84, 145, pl. xxv, fig. 3; text-fig. 50.
Case, E. C. 1915 A, 106, 107, 132, 158, 159, pl. xxii, figs. 1-7; text-figs. 33-37.
1915 D, 797.
1919 B, 272.
Cope, E. D. 1878 LL, 482.
1880 U, 145.
Cummins, W. F. 1908 A, 745.
Dames, W. 1899 C, 366.
Dollo, L. 1884 D, 91.
1893 D, 9.
Fürbringer, M. 1904 A, 576.
Gadow, H. 1901 B, 285.
1902 B, 359. 361.
Gaudry, A. 1888 A, 2.

Gregory, W. K. 1917 B, 312.
Huene, F. 1913 G, 503.
1920 F, 460.
Koken, E. 1898 B, 143.
Lydekker, R. 1903 D, 75.
1912 C, 15.
Matthew, W. D. 1909 G, 94, fig. 5.
Mehl, M. G. 1919 A, 52.
Miner, R. W. 1925 A, 183, fig. 20.
Nopcsa, F. 1923 H, 20.
Osborn, H. F. 1916 E, 611, fig. 23.
1917 B, 311.
Oswald, F. 1909 A, 124.
Romer, A. S. 1922 B, *passim*, pls. xxxvii, xliv.
1924 A, 126.
1925 A, 180, 181.
1926 A, 58.
1928 C, 257.
Schuchert, C. 1910 A, 570.
Schwarz, H. 1908 A, 321.
Thevenin, A. 1910 A, 38.
Watson, D. M. S. 1916 C, 632.
1916 E, 85.
1917 C, 169.
1919 A, 294.
1919 B, 50.
1926 A, 241.
Williston, S. W. 1910 A, 271.
1910 D, 534.
1915 A, 578.
1916 B, 209, figs. 50, 51.
1918 A, 76, fig. 1.
1925 A, 97, 98, 119, 143, fig. 76.
Wiman, C. 1910 A, 40.
Woodward, A. S. 1904 D, 175.
Zittel and Broili 1911 A, 171.
1923 A, 187.

Cricotus crassidiscus Cope.

Hay, O. P. 1902 A, 421.
Beede, J. W. 1907 A, 119.
Broom, R. 1913 F, 564, figs. 1, 3.
Case, E. C. 1911 B, 76.
1915 A, 97.
Cope, E. D. 1885 DD, 305, fig. 172.
Cope and Matthew 1915 A, pls. xvi, xvi*a*.
Cummins, W. F. 1908 A, 743.
Huene, F. 1913 B, 367, fig. 51.
Moodie, R. L. 1911 E, 241.
1912 D, 356.
1914 A, 16.
Permian (Wichita); Texas.

Cricotus gibsoni Cope.

Hay, O. P. 1902 A, 421.
Case, E. C. 1900 A, 709, pl. i, fig. 15.
1911 B, 75.
1915 A 97.
Cope and Matthew 1915 A, pl. iii, fig. 17.
Moodie, R. L. 1911 E, 241.
1914 A, 16 (C. gibsonii).
Pennsylvanian (Upper); Illinois.

Cricotus heteroclitus Cope.

Hay, O. P. 1902 A, 421.
Beede, J. W. 1907 A, 119.
Broom, R. 1913 F, 564 (C. discophorus).
Case, E. C. 1900 A, 708, pl. i, figs. 12-14.
1911 B, 75, 145, 146, pl. xxiv, figs. 1, 2; pl. xxv, figs. 1, 2, 4; text-figs. 50, 51.
1915 A, 97, 157, 159, pl. xx, fig. 1; text-fig. 32.
Cope, E. D. 1891 N, 31, fig. 14.
Cope and Matthew 1915 A, pl. iii, figs. 15, 16.
Dames, W. 1899 C, 366.
Gadow, H. 1901 B, 287.
Moodie, R. L. 1911 E, 241.
1912 D, 326.
1914 A, 16.
Williston, S. W. 1897 K, 395.
Pennsylvanian (Upper); Illinois.

Cricotus hypantricus Cope.

Hay, O. P. 1902 A, 421.
Beede, J. W. 1907 A, 119.
Broom, R. 1913 F, 566, fig. 2.
Case, E. C. 1911 B, 74, 146, text-fig. 51.
1915 A, 97, 159.
Cummins, W. F. 1908 A, 741.
Gadow, H. 1896 A, 41, fig. 42.
Moodie, R. L. 1911 E, 241.
1914 A, 17.
Permian (Wichita); Texas: (Enid); Oklahoma: (Garrison?); Kansas.

Cricotus sp. indet.

Undetermined remains have been mentioned as follows:
Hay, O. P. 1902 A, 421.
Case, E. C. 1900 A, 709, pl. v, figs. 13-16. (Permian; Illinois.)
1902 B, 63. Permian; Oklahoma.
Moodie, R. L. 1914 A, 17. Carboniferous (Upper); Illinois.
Romer, A. S. 1927 A, 232. Permian (Wichita); Texas.
Wegeman, C. H. 1915 A, 25. Permian (Wichita); Oklahoma.

Cricotillus Case. Type *C. brachydens* Case.

Case, E. C. 1902 B, 63.
Arldt, T. 1916 A, 99.
Case, E. C. 1911 B, 14, 78.
Huene, F. 1920 F, 461.
Romer, A. S. 1925 A, 181.
Schuchert, C. 1910 A, 570.
Williston, S. W. 1910 A, 281.
1910 D, 534.

Cricotillus brachydens Case.

Case, E. C. 1902 B, 63, 65.
Beede, J. W. 1907 A, 139.
Case, E. C. 1911 B, 78, text-fig. 20.
1915 A, 97.
Moodie, R. L. 1911 E, 240.
1914 A, 16.
Williston, S. W. 1910 D, 534.
Permian (Enid); Oklahoma.

CHENOPROSOPUS Mehl. Type *C. milleri* Mehl.

Mehl, M. G. 1913 A, 11.
Abel, O. 1919 A, 310.
Case, E. C. 1915 A, 106, 133.
Huene, F. 1920 F, 461.
Williston, S. W. 1915 A, 578.
1916 B, 209.
1918 B, 93.
Zittel and Broili 1923 A, 192.

Chenoprosopus milleri Mehl.

Mehl, M. G. 1913 A, 11, figs. 4-7.
Abel, O. 1919 A, 311, fig. 231.
Case, E. C. 1915 A, 97.
Lydekker, R. 1914 A, 650.
Williston, S. W. 1918 B, 93, fig. 7 ("Chenoprosopus").
Williston and Case 1913 A, 6.
Permian; New Mexico.

SPONDYLERPETON Moodie. Type *S. spinatum* Moodie.

Moodie, R. L. 1912 D, 355.
Gregory, W. K. 1917 B, 312.
Moodie, R. L. 1916 A, 178.
Watson, D. M. S. 1917 C, 169.

Case, E. C. 1915 D, 797.
Moodie, R. L. 1911 E, 240 (No description).
1912 A, 278.
1912 D, 326.
1914 A, 26.
1916 A, 179, pl. iv, figs. 1, 2, text-fig. 39.
Pennsylvanian (Mazon Creek); Illinois.

Spondylerpeton spinatum Moodie.

Moodie, R. L. 1912 D, 326, 355, pl. viii, figs. 1, 2, pl. ix, fig. 1.

MACRERPETIDÆ Moodie.

Moodie, R. L. 1909 A, 354.
Gregory, W. K. 1917 B, 313 (Macrepetidæ).
Moodie, R. L. 1915 F, 189.
1916 A, 181.

MACRERPETON Moodie. Type *Tuditanus huxleyi* Cope.

Moodie, R. L. 1909 E, 72.
Case, E. C. 1917 A, 134.
1919 B, 200.
Gregory, W. K. 1917 B, 312.
Moodie, R. L. 1909 A, 347.
1916 A, 182.
Watson, D. M. S. 1919 B, 21.

Macrerpeton huxleyi (Cope).

Hay, O. P. 1902 A, 415 (Tuditanus).
Moodie, R. L. 1909 A, 347, 354, pl. lix, fig. 1.
1909 B, 28.
1909 D, 239.
1909 E, 72, fig. 17.
1909 F, 217.
1911 A, 490.
1911 H, 239.
1914 A, 21.
1916 A, 182, pl. xxvi, fig. 2.
Pennsylvanian (Linton); Ohio.

Macrerpeton deani Moodie.

Moodie, R. L. 1916 A, 184, pl. xxi, figs. 1, 2; text-fig. 40 (pl. xxii, fig. 4. This species?).
1914 A, 21 (Name only).
Pennsylvanian (Linton); Ohio.

ANTHRACOSAURIDÆ Cope.

Cope, E. D. 1875 X, 10.
Hay, O. P. 1902 A, 421 (Anthracosauridæ); 417 (Dendrerpetontidæ).
Bailey, W. H. 1876 A, 62 (Anthracosaurus).
Gregory, W. K. 1917 B, 313.
Hancock and Atthey 1869 C, 184 (Anthracosaurus).
1869 D, 270 (Anthracosaurus).
Lydekker, R. 1890 A, 157.
Moodie, R. L. 1916 A, 48, 185.
Watson, D. M. S. 1917 C, 168.
Wright and Huxley 1866 A, 169 (Anthracosaurus).
Zittel, Eastman, etc. 1902 A, 131 (Gastrolepidotidæ).
Zittel and Broili 1911 A, 171 (Anthracosaurus).

EOSAURUS Marsh. Type *E. acadianus* Marsh.

Hay, O. P. 1902 A, 421.
Arldt, T. 1916 A, 99.
Brauns, D. 1890 A, 202.
Gregory, W. K. 1917 B, 320.
Moodie, R. L. 1913 B, 32.
1915 F, 189.
Watson, D. M. S. 1919 B, 21.
Williston, S. W. 1909 A, 394.
1910 F, 599.
1925 A, 94.
Zittel and Broili 1911 A, 171.
1923 A, 187.
Zittel, Eastman, etc. 1902 A, 132.

Eosaurus acadianus Marsh.

Hay, O. P. 1902 A, 421.
Agassiz, L. 1862 A, 138 ("sauroid remains").
Bell, W. A. 1913 A, 341, 343.
Lambe, L. M. 1904 C, 14, 20, 35, 46.
Lucas, F. A. 1902 B, 117, figure.
Mackie, S. J. 1863 F, 440.
Moodie, R. L. 1908 B, 362 (E. canadensis).
1909 F, 217.
1910 B, 721 (E. canadensis).
1911 A, 489, 495 (E. canadensis).
1911 H, 239.
1914 A, 18.
1916 A, 187, fig. 41.
Pennsylvanian (Joggins); Nova Scotia.

EOBAPHETES Moodie. Type *Erpetosuchus kansensis* Moodie.

Moodie, R. L. 1916 A, 189.
Gregory, W. K. 1917 B, 312.
Moodie, R. L. 1915 F, 189.
Watson, D. M. S. 1912 A, 8 (Erpetosuchus).
1917 C, 168 (Erpetosuchus).
1919 B, 21 (Erpetosuchus).

Eobaphetes kansensis Moodie.

Moodie, R. L. 1911 A, 491, figs. 1-4 (Erpetosuchus).
Gaupp, E. 1912 A, 566 (Erpetosuchus).
Moodie, R. L. 1914 A, 18 [E. (Erpetosuchus)].
1916 A, 190, fig. 42.
Watson, D. M. S. 1912 A, 8 (Erpetosuchus).
Pennsylvanian; Kansas.

BAPHETES Owen. Type *B. planiceps* Owen.

Hay, O. P. 1902 A, 418.
Arldt, T. 1916 A, 99 (Taphetes).
Moodie, R. L. 1915 F, 189.
1916 A, 186.
Owen, R. 1860 E, 184.
Watson, D. M. S. 1912 A, 8.
1917 C, 168.
1919 B, 21.
1926 A, 198, fig. 4.
Zittel and Broili 1911 A, 171.
1923 A, 187.

Baphetes minor Dawson.

Hay, O. P. 1902 A, 418.
Dawson, J. W. 1870 B, 271.

Lambe, L. M. 1904 C, 20, 35, 45.
Moodie, R. L. 1914 A, 15.
1916 A, 187.
Pennsylvanian (Joggins); Nova Scotia.

Baphetes planiceps Owen.

Hay, O. P. 1902 A, 418.
Lambe, L. M. 1904 C, 20, 35, 45.
Mackie, S. J. 1863 F, 436.
Moodie, R. L. 1908 E, 563 (Raphetes; err. typ.).
1911 A, 489, 495.
1914 A, 15.
1916 A, 186, pl. xxii, fig. 6.
Owen, R. 1860 E, 184.
Pennsylvanian (Joggins); Nova Scotia.

DENDRERPETON Owen. Type *D. acadianum* Owen.

Hay, O. P. 1902 A, 417.
Arldt, T. 1912 A, 650.
Brauns, D. 1890 A, 161.
Broili, F. 1904 A, 37.
1908 F, 60.
Dawson, J. W. 1888 A, 393.
Depéret, C. 1907 B.
1912 A, 704.
Gregory, W. K. 1917 B, 312.
Heilprin, A. 1887 A, 310.
Huxley, T. H. 1863 C, 571.
Moodie, R. L. 1912 D, 327.
1916 A, 192.
Owen, R. 1876 E, 45.
Wills, L. J. 1916 A, 17.
Zittel and Broili 1923 A, 200.

Dendrerpeton acadianum Owen.

Hay, O. P. 1902 A, 418.

Bell, W. A. 1913 A, 343.
Broili, F. 1908 F, 60.
Dawson, J. W. 1854 A, 22.
Jaeger, G. 1856 A, 959.
Lambe, L. M. 1904 C, 20, 35, 45.
Lull, R. S. 1918 B, 202.
Mackie, S. J. 1863 F, 436, 437.
Moodie, R. L. 1916 A, 192, pl. vi.
Pennsylvanian (Joggins); Nova Scotia.

Dendrerpeton oweni Dawson.

Hay, O. P. 1902 A, 418.
Bell, W. H. 1913 A, 343.
Lambe, L. M. 1904 C, 20, 35, 45.
Mackie, S. J. 1863 F, 438.
Moodie, R. L. 1914 A, 17 (D. owenii).
1916 A, 194, pl. xiii.
1920 B, 466, fig. 3 ("4-footed animal").
Pennsylvanian (Joggins); Nova Scotia.

PLATYSTEGOS Dawson. Type *P. loricatum* Dawson.

Hay, O. P. 1902 A, 418.
Moodie, R. L. 1916 A, 197.
A genus of somewhat uncertain position.

Platystegos loricatum Dawson.

Hay, O. P. 1902 A, 418.
Lambe, L. M. 1904 C, 20, 35, 45.
Moodie, R. L. 1914 A, 24.
1916 A, 197.
Pennsylvanian (Joggins); Nova Scotia.

ERYOPIDÆ Cope.

Hay, O. P. 1902 A, 421.
Abel, O. 1919 A, 277.
Arldt, T. 1907 D, 678 (Rhachitomi).
1909 B, 353 ("eryopiden").
1912 A, 656 (Eryopidæ, Rhachitomi).
1916 A, 142 ("eryopiden").
Broili, F. 1904 D, 582 ("rhachitomen").
1913 A, 98.

Case, E. C. 1911 B, 14, 23, 80, 81.
1915 A, 96.
Cope, E. D. 1891 N, 29.
Dollo, L. 1884 D, 88.
Huene, F. 1913 G, 506.
1920 C, 211 (Eryopinæ).
Jaekel, O. 1909 A, 204.
1922 A, 23.

Lydekker, R. 1885 F, 9, 10 (Actinodontidæ); 9 (Rhachitomi).
Moodie, R. L. 1909 D, 243 (Rhachitomi).
1910 C, 240, 242 (Eryopidæ); 240 (Rhachitomi).
1916 A, 180.
Watson, D. M. S. 1919 B, 2, 64 (Rhachitomi, Eryopidæ).
Williston, S. W. 1910 D, 535 (Eryopidæ, Rhachitomi).
1911 B, 9.
1916 B, 200 (Eryopidæ, Rhachitomi).
1918 A, 75 (Rhachitomi).
Zittel and Broili 1911 A, 168 (Rhachitomi).
1923 A, 187.

Eryops Case. Type *E. megacephalus* Cope.

Hay, O. P. 1902 A, 421.
Abel, O. 1912 F, 671.
1919 A, 223, 256, figs. 172, 188, 194, 206.
1921 A, 250.
Adams, L. A. 1919 A, 128, pl. xii.
Amalitsky, V. P. 1921 B, 9.
1924 A, 58.
1924 B, 72.
Anonymous 1912 A, 519.
Arldt, T. 1916 A, 102.
Beasley, W. L. 1907 A, 368.
Boas, J. E. V. 1914 C, 239, fig. 5.
Boule, M. 1891 A, 8.
Boulenger, G. A. 1901 B, 401.
Branson, E. B. 1905 B, 568, 595, 610, figs. 5, 11-14, 16, 18, 19.
Branson and Mehl 1928 C, 488.
Broili, F. 1904 A, 28, 49, 62.
1904 B, 484.
1904 D, 579.
1908 D, 236.
1913 C, 529.
1913 D, 351.
1917 A, 572.
1926 A, 209, figs. 5, 9.
Broom, R. 1901 A, 185.
1903 E, 136.
1904 B, 90.
1908 A, 1058.
1908 D, 373.
1910 C, 476.
1911 B, 79.
1913 E, 531.
1913 F, 563, 579.
1913 H, 73.
1913 I, 355.
1915 C, 30.
1917 A, 977.
1926 A, 263.
Bulman and Whittard 1926 A, 577.
Case, E. C. 1902 A, 48.
1903 C, 394, fig. 1.
1908 B, 235, pl. lix, figs. 5-8; text-figs. 1-3.
1908 C, 576, 579.
1908 D, 567.
1911 B, 14, 23, 81, 91, 93, pl. v, figs. 3, 4; pl. viii, fig. 2; pl. xv, fig. 10; text-fig. 26.
1915 A, 126, 165, pl. xxiii, figs. 1-4.
1924 B, 6.
Cope, E. D. 1880 U, 145 (Rhachitomus).
Credner, H. 1893 A, 673, 688.
Cummins, W. F. 1908 A, 745.
Dollo, L. 1893 D, 9.
Douthitt, H. 1917 A, 237.
Drevermann, F. 1914 B, 628.
1920 A, 89, 100, 104.
Eastman, C. R. 1917 B, 656.
Eastman, Gregory, and Matthew 1917 A, 118.
Emery, C. 1901 A, 672, fig. 12.
Frassetto, F. 1915 A, 52.
Fuchs, H. 1912 B, 89.
Fürbringer, M. 1904 A, 576.
Gadow, H. 1896 A, 21, 22, 51 (Syn. of Rhachitomus).
1901 B, 285.
1902 B, 359, 361.
Gaudry, A. 1888 A, 2.
1896 A, 59.
Gaupp, E. 1912 A, 565.
Gregory, W. K. 1910 A, 439, 440.
1911 A, 508.
1913 D, 807.
1915 D, 336, fig. 11.
1917 B, 312.
1920 A, 223.
Gregory and Camp 1918 A, 547.
Gregory, Miner and Noble 1923 A, 279.
Gregory and Noble 1924 A, 439, fig. 1.
Hanson, F. B. 1920 B, 335, 337.
Heilprin, A. 1887 A, 155.
Hitchcock and Grier 1927 A, 192.
Hoepen, E. C. N. 1915 A, 140, 142.
Huene, F. 1902 A, 8.
1909 D, 332.
1912 D, 98, figs. 2-8.
1913 B, 379.
1913 G, 502.
1922 D, 280.
1922 G, 404, 448, 453.
Jaekel, O. 1903 A, 118.
1908 B, 467.
1919 A, 91.
1922 A, 24.
Kehrer, F. A. 1896 A, 353.
Kingsley, J. S. 1925 A, 120, 122, 246, figs. 126, 128, 259.
Koken, E. 1898 B, 143.
Lakjer, T. 1927 A, figs. 82, 115.
Lucas, F. A. 1902 B, 118, figure.
Lydekker, R. 1885 F, 10 (Eryops); 10, 11 (Rhachitomus).
1903 D, 75.
1912 C, 15.
Martin, H. T. 1922 B, 104.
Matthew, W. D. 1909 G, 92, fig. 2.
1911 D, 197, figs.
Mehl, M. G. 1919 A, 52.
Miner, R. W. 1925 A, *passim*, 23 figs.
Moodie, R. L. 1910 C, 243.
1911 H, 239.
1915 G, 370.
1915 J, 318.
1916 A, 180.
Morton, D. J. 1926 A, 413.

Neumayer, L. 1904 A, 121.
Nopcsa, F. 1923 E, 1047.
1926 A, 635.
Osborn, H. F. 1916 E, 612, figs. 22, 23.
1917 B, 312.
Perrier, E. 1920 A, 281.
Raymond, P. E. 1907 A, 836.
Rogers, A. F. 1924 A, 546.
Romer, A. S. 1922 B, 525, 564, pls. xxxiii, xxxvii, xliv, xlvi.
1924 A, 122, 124, figs. 1-3.
1925 B, 450.
1926 A, 59.
1928 C, 257, 258.
Schmalhausen, J. J. 1908 A, 342.
1917 A, 96, 107, fig. L.
1917 B, 135.
Schuchert, C. 1910 A, 570.
1915 A, 802.
Schwarz, H. 1908 A, 320.
Sewertzoff, A. N. 1908 A, 387.
Steiner, H. 1921 A, 534, 535.
1922 A, 331, 340.
Steinmann, G. 1907 A, 426, fig. 750.
1908 A, 214.
Stensiö, E. A. 1921 A, 141.
Sternberg, C. H. 1909 C, 217, 227.
1917 A, 184.
Stromer, E. 1913 A, 61.
Sushkin, P. P. 1927 A, 274, 280, 314, figs. 5, 6, 13, 14.
Thevenin, A. 1910 A, 38, fig. 15.
Versluys, J. 1912 B, 568, fig. a.
Villiers, C. G. S. 1922 A, 218.
Watson, D. M. S. 1912 A, 9.
1912 B, 584.
1913 C, 341.
1913 F, 956, 957.
1914 F, 780.
1914 G, 1004.
1914 H, 1014.
1916 B, 45.
1916 C, 612, 630, figs. 1-4.
1916 E, 83.
1917 A, 979.
1917 B, 2.
1919 A, 286.
1919 B, 3, 23, 49, 51, 64, figs. 1, 11, 29, 30.
1921 C, 72, 73.
1926 A, 202.
Whittard, W. F. 1928 A, 263.
Williston, S. W. 1909 B, 641.
1910 D, 535.
1910 F, 596.
1911 D, 379.
1914 A, 31, figs. 14, 24.
1914 C, 57, 62, fig. 1.
1914 E, 121.
1915 A, 578.
1915 B, 253.
1916 A, 173.
1916 B, 201, figs. 38-40.
1918 A, 76, figs. 1, 2.
1918 B, 87, pl. iii, text-figs. 14, 16.
1925 A, 24, 97, 126, 136, 168, 170, 195, figs. 10, 25, 76, 108, 136.
Wills, L. J. 1916 A, 5, fig. 1.
Wiman, C. 1921 A, 27.
1922 A, 118.
1923 B, 274.
Zittel and Broili 1911 A, 168.
1923 A, 172, 187, fig. 267.
Zittel, Eastman, etc. 1902 A, 131.

Eryops erythroliticus Cope.

Hay, O. P. 1902 A, 422.
Beede, J. W. 1907 A, 118.
Cummins, W. F. 1908 A, 744.
Moodie, R. L. 1911 E, 252 (=E. megocephalus?).
1916 A, 181.
A doubtful species.
Permian; Texas.

Eryops latus Case.

Case, E. C. 1903 C, 394, fig. 2.
Ameghino, F. 1909 A, 42, fig. 26.
Case, E. C. 1911 B, 31.
1915 A, 96.
Moodie, R. L. 1911 E, 252.
1914 A, 18.
Stappenbeck, R. 1905 A, 405.
Williston, S. W. 1909 B, 657, fig. 7.
1910 D, 535.
Permian (Wichita, Clear Fork); Texas.

Eryops megacephalus Cope.

Hay, O. P. 1902 A, 422.
Abel, O. 1919 A, 235, figs. 185, 187, 190, 205.
1920 A, 350.
Beede, J. W. 1907 A, 119, 139 (E. megacephalus, Rhachitomus valens).
Boas, J. E. V. 1914 C, 241, fig. 8.
Broili, F. 1904 D, 581, figs. 3, 8, 9.
1908 D, 235, fig.
1908 F, 51.
1917 A, 572, figs. 16, 17.
1927 A, 187 (E. macrocephalus).
Broom, R. 1913 F, 579, figs. 11-16, 18.
Case, E. C. 1902 B, 63, 65.
1903 C, 394.
1911 B, 28, 29, 92, 109, pl. iv, fig. 2; pls. vi, vii; pl. viii, figs. 1, 3, 4; pls. ix, x; text-figs. 24, 25, 27-33, 40.
1912 B, 681.
1915 A, 96, 126, 157, 165; pl. xx, fig. 2, text-fig. 38.
Cope, E. D. 1885 DD, 307, figs. 170, 171.
1885 EE, 613, fig 3.
1885 FF, 794, fig. 5.
Cope and Matthew 1915 A, pls. x-xiii.
Cossmann, M. 1900 A, 51.
Cummins, W. F. 1908 A, 742.
Gadow, H. 1896 A, 41, fig. 41.
1901 B, 286.
Gaudry, A. 1893 A, 21.
Gould, C. W. 1901 A, 339.
Gregory, W. K. 1911 A, 508.
1915 D, 368, fig. 15.
1920 A, 116, fig. 20.
1922 A, 11, fig. 6.
Gregory, Miner, and Noble 1923 A, 280, figs. 1, 3.
Heilmann, G. 1926 A, 46, fig. 32.
Huene, F. 1902 A, 8, figs. 3, 15.

Huene, F. 1912 D, 98, fig. 1.
1913 B, 318, figs. 1-6.
1922 G, 456, fig. 44.
Hutchinson, H. N. 1910 A, 99, fig. 20 (E. macrocephalus).
Jaekel, O. 1922 A, 12 (E. megalocephalus).
Koken, E. 1900 C, 144.
Lakjer, T. 1927 A, 192, fig. 70.
Miner, R. W. 1925 A, 150, 155, figs. 1, 4, 102.
Moodie, R. L. 1908 G, 524, fig. 11.
1911 E, 240.
1914 A, 19.
Schuchert, C. 1910 A, 570.
Schwarz, H. 1908 A, 320.
Sternberg, C. H. 1903 E, 94.
1909 C, 251.
Thevenin, A. 1910 A, 27.
Watson, D. M. S. 1926 A, 196, fig. 1.
Wegeman, C. H. 1915 A, 26.
Wegner, R. N. 1922 A, 462.
Wiman, C. 1914 A, 2, figs. 7, 8 (E. megalocephalus).
1916 B, 219.
Zittel and Broili 1911 A, 108, fig. 299.
1923 A, 178, figs. 275, 286, 290, 291.
Zittel, Eastman, etc. 1902 A, 130, fig. 219.
Permian (Clear Fork, Wichita); Texas: (Enid); Oklahoma: Pennsylvanian? (Upper); Pennsylvania).

Eryops reticulatus Cope.

Hay, O. P. 1902 A, 422.
Case, E. C. 1911 B, 30, 109, text-fig. 40.
Case, E. C. 1915 A, 96.
Cummins, W. F. 1908 A, 744.
Douthitt, H. 1917 A, 239, 241 (=? Eryopsoides grandis?).
Moodie, R. L. 1911 E, 240.
1914 A, 19.
Williston and Case 1913 A, 6.
Permian; New Mexico.

Eryops willistoni Moodie.

Moodie, R. L. 1911 E, 243, pls. xli-liv.
Case, E. C. 1915 A, 96.
Moodie, R. L. 1911 E, 243.
1913 A, 248.
1914 A, 19.
Williston, S. W. 1912 C, 3.
Williston and Case 1912 A, 3.
Permian (Enid); Oklahoma.

Eryops sp. indet.

Undetermined remains of *Eryops* have been reported as follows:
Case, E. C. 1916 B, 709. Permo-Carboniferous; New Mexico.
Cummins, C. F. 1908 A, 740. Permian; Texas.
Moodie, R. L. 1916 A, 181, pl. xviii, fig. 2. Pittsburgh Red Shale; Pennsylvania.
Romer, A. S. 1927 A, 232. Permian; Texas.
Watson, D. M. S. 1919 B, 3, fig. 1. Permian; Texas.
Wegeman, C. H. 1915 A, 25. Permian (Wichita); Oklahoma.

Eryopsoides Douthitt. Type *Ophiacodon grandis* Marsh.

Douthitt, H. 1917 A, 237, 241.
This is a genus of doubtful standing.

Eryopsoides grandis (Marsh).

Hay, O. P. 1902 A, 434 (Ophiacodon).
Case, E. C. 1915 A, 96 (Eryops).
Douthitt, H. 1917 A, 239, 241 (Ophiacodon; type of Eryopsoides).
Mehl, M. G. 1912 C, 409 (Ophiacodon).
Moodie, R. L. 1914 A, 18 (Eryops).
Williston, S. W. 1911 B, 10 (Eryops).
1911 D, 379 (Ophiacodon).
Williston and Case 1913 A, 6 (Eryops).
1913 B, 37 (Eryops).
Permian (Garrison?); New Mexico.

Parioxys Cope. Type *P. ferricolus* Cope.

Cope, E. D. 1878 B, 521.
Hay, O. P. 1902 A, 421 (Eryops, in part).
Case, E. C. 1911 B, 14, 31, 81 (Eryops).
1915 A, 127 (Parioxys).
Cope, E. D. 1878 U.
Watson, D. M. S. 1919 B, 4, 64.
Williston, S. W. 1916 B, 201.

Parioxys anatinus (Broom).

Broom, R. 1913 F, 591, figs. 19, 20 (Eryops).
Abel, O. 1919 A, 276, fig. 204 (Eryops).
Case, E. C. 1911 B, 96, pl. viii, fig. 2; text-fig. 26 (Eryops sp.).
Watson, D. M. S. 1919 B, 4 (To Parioxys?).
Permian; Texas.

Parioxys ferricolus Cope.

Hay, O. P. 1902 A, 422 (Eryops).
Beede, J. W. 1907 A, 119 (Eryops).
Case, E. C. 1911 B, 32, 104, text-fig. 4.
1915 A, 96 (P. ferricolis).
Cummins, W. F. 1908 A, 744 (Eryops).
Moodie, R. L. 1911 E, 240 (Eryops).
1914 A, 24.
Permian (Clear Fork); Texas.

Anisodexis Cope. Type *A. imbricarius* Cope.

Hay, O. P. 1902 A, 423.
Broili, F. 1904 A, 35, 47, 49.
Case, E. C. 1911 B, 14, 33, 81.
1915 A, 127.
Cummins, W. F. 1908 A, 745.
Lydekker, R. 1885 F, 10.
Schuchert, C. 1910 A, 570.
Williston, S. W. 1910 A, 271.
1916 B, 201.

Anisodexis imbricarius Cope.

Hay, O. P. 1902 A, 423.
Beede, J. W. 1907 A, 119.
Case, E. C. 1911 B, 33, 104.
Case, E. C. 1915 A, 96.
Cummins, W. F. 1908 A, 743.
Moodie, R. L. 1911 E, 240.
1914 A, 14.
Permian (Clear Fork); Texas.

ACHELOMIDÆ Watson.

Watson, D. M. S. 1919 B, 65.

ACHELOMA Cope. Type *A. cumminsi* Cope.

Hay, O. P. 1902 A, 423.
Broili, F. 1904 A, 35, 47, 49.
1905 A, 16, 47.
1913 A, 98.
Case, E. C. 1911 B, 14, 34, 82, 104, 136.
1915 A, 127.
Cummins, W. F. 1908 A, 745.
Lydekker, R. 1885 F, 10, 11.
Romer, A. S. 1922 B, 555, fig. 5.
Schuchert, C. 1910 A, 570.
Watson, D. M. S. 1919 B, 7, 65.
Williston, S. W. 1909 B, 658.
1909 D, 129.
1910 A, 271.
1910 D, 533.
1916 B, 202.
Zittel and Broili 1923 A, 189.

By Williston this genus is referred with doubt to the Trematopsidæ.

Acheloma casei Broili.

Broili, F. 1913 A, 98, pl. ix, figs. 1, 2 (Acheloma?).
Case, E. C. 1915 A, 96.
Permian (Clear Fork); Texas.

Acheloma cumminsi Cope.

Hay, O. P. 1902 A, 423.
Beede, J. W. 1907 A, 119.
Broili, F. 1913 A, 98.
Case, E. C. 1911 B, 35, 104, pl. xi, text-figs. 34, 35.
1915 A, 96.
Cummins, W. F. 1908 A, 743.
Huene, F. 1913 B, 370, fig. 55.
Mehl, M. G. 1912 C, 409.
Moodie, R. L. 1911 E, 240.
1914 A, 14.
Permian (Clear Fork); Texas.

TREMATOPSIDÆ Williston.

Williston, S. W. 1910 A, 278.
Abel, O. 1919 A, 278.
Arldt, T. 1916 A, 142 ("trematophiden").
Broili, F. 1913 A, 98.
Case, E. C. 1911 B, 66, 81, 83, 130; 14 (Trematosauridæ).
1915 A, 97.
Eastman, C. R. 1912 C, 657.
Huene, F. 1913 G, 507.
Huene, F. 1920 C, 211.
Jaekel, O. 1922 A, 23.
Mehl, M. G. 1926 A, 206.
Nopcsa, F. 1923 H, 136 ("trematopsiden").
Watson, D. M. S. 1919 B, 65.
Williston, S. W. 1910 D, 535.
1914 C, 60.
1916 B, 201.
Zittel and Broili 1923 A, 191.

TREMATOPS Williston. Type *T. milleri* Williston.

Williston, S. W. 1909 B, 636.
Abel, O. 1912 F, 138.
1919 A, 256.
1921 A, 251.
Amalitsky, V. P. 1924 B, 74.
Anonymous 1912 A, 519.
Broili, F. 1915 A, 574.
Broom, R. 1910 A, 214, 220.
1921 A, 145.
Case, E. C. 1911 B, 67, 83, 130; 14 (Trematosaurus).
1912 A, 203.
1915 A, 131.
Douthitt, H. 1917 A, 238.
Geol. Magazine, 1912 A, 519.
Gregory, Miner and Noble 1923 A, 285.
Heilmann, G. 1926 A, 159, fig. 113.
Huene, F. 1913 B, 379.
1913 G, 502.
1922 G, 458.
Jaekel, O. 1922 A, 22, 23.
Lakjer, T. 1927 A, 192, 196, fig. 73.
Mehl, M. G. 1926 A, 466.
Moodie, R. L. 1911 C, 377.
1912 D, 338.
1915 J, 318.
Nopcsa, F. 1923 E, 1049, fig. 8.
1926 A, 635.
Osborn, H. F. 1916 E, 614.
Romer, A. S. 1928 C, 257.
Schmalhausen, J. 1917 A, 107.
Steiner, H. 1922 A, 331, 340.
Thorpe, M. R. 1926 A, 77.
Watson, D. M. S. 1913 C, 346.
1913 D, 24.
1914 M, 348.
1917 B, 2.
1919 A, 286.
1919 B, 7, 53, 65.
Williston, S. W. 1910 A, 270, 278.
1910 D, 533, 535.
1910 F, 597.
1914 C, 62.
1914 E, 121.
1915 A, 249.
1916 B, 202, figs. 41, 42.

Williston, S. W. 1925 A, 169, 184, 185, 195, fig. 151.
Wiman, C. 1917 A, 235.
Zittel and Broili 1911 A, 169.

Trematops milleri Willist.

Williston, S. W. 1909 B, 637, figs. 1-6.
Abel, O. 1912 F, 219, 385, 386.
1919 A, 258, figs. 197, 207, 208.
1920 A, 349, fig. 552.
Broom, R. 1921 A, 144, fig. 1.
Case, E. C. 1911 B, 67, 130, pls. xiv-xvi; text-figs. 46.
1915 A, 31, 97, 131; text-fig. 19.
Gilmore, C. W. 1926 A, 22, 36; text-fig. 15.
Gordon, C. H. 1913 A, 25.
Huene, F. 1909 D, 332.
1913 G, 503, fig. 4.
Mehl, M. G. 1926 A, 470.
Moodie, R. L. 1911 E, 239, 240.
1914 A, 27.
Osborn, H. F. 1918 D, 686.
Schmalhausen, J. 1917 B, 135, fig. 5.
Steiner, H. 1921 A, 536.
Williston, S. W. 1910 A, 278.
1910 D, 535.
1911 B, 142, figs. 3, 4.
1914 C, 61, fig. 3.
Williston and Case 1913 B, 56, text-fig. 35.
Zittel and Broili 1911 A, 169, fig. 300.
1923 A, 183, figs. 287, 293.
Permian (Clear Fork); Texas.

Trematops thomasi Mehl.

Mehl, M. G. 1926 A, 466, figs. 1-4.
Permian (Clear Fork); Oklahoma.

ARCHEGOSAURIDÆ Fritsch.

Fritsch, A. 1885, Fauna der Gaskohle, etc., ii, 13.
Hay, O. P. 1902 A, 419.
Abel, O. 1919 A, 272.
Broili, F. 1927 D, 375, 378, pl. vii; text-figs. 3, 4.
Gadow, H. 1896 A, 17 (Archegosauri).
Huene, F. 1913 G, 507.
1926 A, 262 (Rhachitomi).
Huxley, T. H. 1875 C, 751.
Lydekker, R. 1890 A, 177.
Nicholson and Lydekker 1889 A, 1029.
Zittel and Broili 1923 A, 192.

ARCHEGOSAURUS Goldfuss.

Goldfuss, G. A. 1847 B, 400.
Hay, O. P. 1902 A, 419.
Abel, O. 1919 A, 898, figs. 171, 196.
Broili, F. 1908 D, 239.
1927 D, 378, pl. vii; text-figs. 3, 4.
Jaekel, O. 1911 A, 112, fig. 125.
Lydekker, R. 1890 A, 177, fig. 43.
Nicholson and Lydekker 1889 A, 1029, fig. 958.
Owen, R. 1866 A, 158.
Schwarz, H. 1908 A, 320.
Whittard, W. F. 1928 A, 255, pl. iii, 3 text-figs.
Woodward, A. S. 1898 B, 133, figs. 84, 86, 87.

Type *A. dechenii* Goldfuss.

Zittel, K. A. 1890 (1888) A, 351, 384, figs. 328, 329, 332, 373, 377.
Zittel and Broili 1911 A, 166, figs. 296, 297.
1923 A, 192, fig. 298*a*.

Archegosaurus sp. indet.

Cooper, J. G. 1875 B, 402. Undetermined deposit. Mare Island, California.
Cooper stated that a tooth had been found by himself and that the identification had been made by Professor Louis Agassiz.

TRIMERORHACHIDÆ Cope.

Hay, O. P. 1902 A, 419 (Archegosauridæ, in part).
Abel, O. 1919 A, 275.
1920 A, 350 ("trimerorhachiden").
Amalitsky, V. P. 1924 A, 62.
Arldt, T. 1907 D, 678 (Rhachitomi).
1912 A, 656 (Trimerorhachidæ, Rhachitomi).
1916 A, 95, 142 ("trimerorachiden").
Boulenger, G. A. 1902 F, 383.
Broili, F. 1904 D, 582 ("rhachitomen").
1913 A, 98.
Case, E. C. 1911 B, 14, 23, 38, 80.
1915 A, 97.
Cope, E. D. 1891 N, 29.
Dollo, L. 1884 D, 88.
Huene, F. 1913 G, 506.
Jaekel, O. 1922 A, 23.
Lydekker, R. 1885 F, 9 (Trimerorhachidæ, Rhachitomi).
Moodie, R. L. 1909 D, 243 (Rhachitomi).
1910 C, 240 (Rhachitomi).
1911 E, 240.
Sus[c]hkin, P. P. 1925 A, 180 (Rhachitomi).
Watson, D. M. S. 1917 B, 2 (Rhachitomi).
1919 B, 66.
Williston, S. W. 1910 D, 535 (Trimerorhachidæ, Rhachitomi).
1916 B, 200 (Rhachitomi); 206 (Trimerorhachidæ).
1918 A, 75 (Rhachitomi).
Zittel and Broili 1923 A, 192.

TRIMERORHACHIS Cope.

Hay, O. P. 1902 A, 420.
Abel, O. 1919 A, 274.
Amalitsky, V. P. 1921 A, 8.
1924 A, 51.
Anonymous 1912 A, 519.
Arldt, T. 1916 A, 98.
Broili, F. 1904 A, 30, 48, pl. iii, figs. 3-7; pl. iv, figs. 1-3.

Type *T. insignis* Cope.

Broili, F. 1908 F, 50.
1914 A, 164.
1926 A, 206, 213.
Broom, R. 1910 C, 476.
1913 F, 563, 569.
1913 H, 73.
1915 B, 368.
1917 A, 977.

Bryant, W. L. 1919 A, 11.
Case, E. C. 1908 C, 576, 579.
1911 B, 14, 39, 82, 106, pl. xii, fig. 2; text-figs. 40-42.
1915 A, 127, text-fig. 14.
Cummins, W. F. 1908 A, 745.
Dollo, L. 1893 D, 10.
Drevermann, F. 1920 A, 91, 105.
Eastman, C. R. 1916 A, 655.
Gadow, H. 1901 B, 82.
Gaudry, A. 1888 A, 2.
Geol. Mag. 1912 A, 519.
Gould, C. W. 1901 A, 339.
Gregory, W. K. 1915 D, 336, fig. 3.
1916 D, 105 (Trimerorachis).
1917 C, 975.
1920 A, 222.
Hoepen, E. C. N. 1915 A, 136.
Huene, F. 1913 B, 372.
1922 G, 448, 453.
Kingsley, J. S. 1925 A, 123, fig. 130.
Lakjer, T. 1927 A, 195.
Lydekker, R. 1885 F, 11.
Moodie, R. L. 1915 G, 371.
1915 J, 318.
Osborn, H. F. 1916 E, 614.
1917 B, 182.
1918 D, 687.
Romer, A. S. 1928 C, 257.
Schuchert, C. 1910 A, 570.
Schwartz, H. 1908 A, 320.
Sewertzoff, A. N. 1926 D, 81.
Stensiö, E. A. 1921 A, 142.
Sushkin, P. P. 1927 A, 280, 284, 310.
Watson, D. M. S. 1912 B, 586.
1914 F, 780.
1916 C, 631.
1916 E, 84 (Trimerorachis).
1919 A, 286.
1919 B, 7, 50, 59.
Whittard, W. F. 1928 A, 263.
Williston, S. W. 1910 A, 272, pl. xv, fig. 6.
1910 D, 533, 535.
1910 F, 586.
1913 B, 625.
1914 A, 26, fig. 9.
1914 D, 415, 418.
1915 A, 578.
1915 B, 246, figs. 3, 5, 6.
1916 B, 207, figs. 46, 47.
1916 C, 291, figs. 1-3.
1917 A, 309.
1918 A, 76, fig. 1.
1925 A, 94, 98.
Wills, L. J. 1916 A, 8, 17.
Zittel and Broili 1911 A, 169.
1923 A, 181, 192, fig. 276.

Trimerorachis alleni Case.

Case, E. C. 1910 A, 181.
Abel, O. 1919 A, 275, fig. 203.
1920 A, 351, fig. 555.
Case, E. C. 1911 B, 47, text-fig. 7.
1915 A, 97.
Moodie, R. L. 1911 C, 379.
1914 A, 27.
Williston, S. W. 1913 B, 626, fig. 1 (This species?).
1914 D, 416, fig. 17.
1925 A, 28, fig. 14.
Permian (Clear Fork); Texas.

Trimerorachis bilobatus Cope.

Hay, O. P. 1902 A, 420.
Beede, J. W. 1907 A, 119.
Broili, F. 1904 A, 30.
Case, E. C. 1911 B, 43, text-fig. 5.
1915 A, 97.
Cummins, W. F. 1908 A, 741.
Moodie, R. L. 1911 E, 240.
1914 A, 27.
Permian (Wichita); Texas.

Trimerorachis conangulus Cope.

Hay, O. P. 1902 A, 420.
Beede, J. W. 1907 A, 120.
Broili, F. 1904 A, 30 (T. coangulus).
1908 F, 50 (T. coangulus).
Broom, R. 1913 F, 578.
Case, E. C. 1911 B, 44, 112, pl. v, fig. 6; text-fig. 6.
1915 A, 97.
Cummins, W. F. 1908 A, 744.
Moodie, R. L. 1911 E, 240.
1914 A, 27.
Permian (Clear Fork); Texas.

Trimerorachis insignis Cope.

Hay, O. P. 1902 A, 420.
Abel, O. 1919 A, 274, fig. 202.
1920 A, 348, fig. 551.
1922 C, 568, fig. 470.
Beede, J. W. 1907 A, 119.
Broili, F. 1904 A, 31.
1908 F, 50.
Broom, R. 1913 F, 569, figs. 4-9.
1913 H, 74, fig. 1.
Case, E. C. 1902 B, 64 (This species?).
1911 B, 41, 43, 107, 112, pl. xii, fig. 4; text-figs. 5, 36-39, 41.
1915 A, 97.
Cope, E. D. 1891 N, 28, figs. 11, 12.
Cope and Matthew 1915 A, pl. vii, fig. 1; pl. viii.
Cummins, W. F. 1908 A, 744.
Gregory, W. K. 1920 A, 115, fig. 12.
Huene, F. 1913 B, 372, fig. 57.
Moodie, R. L. 1911 E, 240.
1914 A, 27.
Osborn, H. F. 1918 D, 686.
Williston, S. W. 1914 C, 60, fig. 2.
1914 D, 417, figs. 18, 19.
1915 B, 247, figs. 1, 2, 4.
1925 A, 29, fig. 15.
Wiman, C. 1916 B, 215.
Permian (Wichita); Texas: (Enid); Oklahoma.

Trimerorachis leptorhynchus Case.

Case, E. C. 1902 B, 63, 64.
Beede, J. W. 1907 A, 139.
Case, E. C. 1911 B, 45.
1915 A, 97.

Moodie, R. L. 1911 E, 240.
1914 A, 27.
Williston, S. W. 1910 D, 535.
Permian (Enid); Oklahoma.

Trimerorhachis medius Broom.

Broom, R. 1913 F, 577, fig. 10.
Permian: Locality not given.

Trimerorhachis mesops Cope.

Hay, O. P. 1902 A, 420.
Beede, J. W. 1907 A, 120.
Broili, F. 1904 A, 30.
Case, E. C. 1911 B, 46, 112, pl. xii, fig. 1.
1915 A, 97.
Cummins, W. F. 1908 A, 743.
Huene, F. 1913 B, 372, fig. 56.
Moodie, R. L. 1911 E, 240.
1914 A, 27.
Permian (Clear Fork); Texas.

Trimerorhachis sp. indet.

Cummins, W. F. 1908 A, 740. Permian; Texas.
Phillips, W. B. 1912 A, 41 (Trimerorachis).
Permian (Wichita); Texas.
Tilton, J. L. 1926 B, 393, fig. 2 (This genus?).
Permian (Gilmore); West Virginia.

TERSOMIUS Case. Type *T. texensis* Case.

Case, E. C. 1910 A, 180.
Arldt, T. 1916 A, 98.
Broili, F. 1913 A, 98.
Case, E. C. 1911 B, 14, 51.
Moodie, R. L. 1911 C, 379.
Williston, S. W. 1916 B, 207.
Zittel and Broili 1923 A, 193.
A genus of uncertain position.

Tersomius texensis Case.

Case, E. C. 1910 A, 180, text-fig. 10.
1911 B, 51.
1915 A, 97.
Moodie, R. L. 1914 A, 26.
Permian (Clear Fork); Texas.

DISSOROPHIDÆ Willist.

Williston, S. W. 1910 A, 277.
Hay, O. P. 1902 A, 429 (Chelydosauria, in part); 492 (Otocœlidæ).
Abel, O. 1919 A, 278.
Arldt, T. 1912 A, 656 (Dissorophidæ).
1916 A, 98, 142 ("dissorophiden").
Boulenger, G. A. 1902 F, 383.
Broili, F. 1904 A, 69, 100 (Otocœlidæ).
1913 A, 98 (Dissorophidæ).
Case, E. C. 1905 A, 298 (Otocœlidæ, Chelydosauria, in part).
1905 B, 127 (Otocœlidæ, Chelydosauria, in part).
1907 E, 157 (Chelydosauria, in part).
1908 D, 565 (Chelydosauria, in part).
1911 B, 57 (Otocœlidæ); 14, 51, 80, 116 (Dissorophidæ).
Case, E. C. 1915 A, 97, 107.
Case and Williston 1913 A, 7 (Dissorophidæ, Aspidosauridæ).
Eastman, C. R. 1912 C, 657.
Hay, O. P. 1908 A, 29 (Otocœlidæ).
Huene, F. 1913 G, 507.
1920 C, 211.
Jaekel, O. 1922 A, 25.
Moodie, R. L. 1911 E, 241.
Watson, D. M. S. 1919 B, 65 (Dissorophidæ, Dissorophinæ).
Williston, S. W. 1908 A, 140 (Otocœlidæ).
1910 D, 535.
1914 B, 56 (Dissorophidæ, Dissorophinæ).
1916 B, 202 (Dissorophidæ, Dissorophinæ).
Zittel and Broili 1923 A, 190.

DISSOROPHUS Cope. Type *D. multicinctus* Cope.

Hay, O. P. 1902 A, 420 (Dissorophus); 430 (Otocœlus).
Abel, O. 1919 A, 280.
Anonymous 1912 A, 520.
Broili, F. 1904 A, 43 (Dissorophus; 100 (Otocœlus).
1913 A, 97.
Broom, R. 1903 D, 292 (Otocœlus).
Case, E. C. 1905 A, 298 (Otocœlus).
1905 B, 127 (Otocœlus).
1907 D, 558 (Otocœlus).
1908 C, 579.
1908 D, 565 (Otocœlus).
1911 B, 14, 52, 82, 115 (Dissorophus); 54, 58, 59 (Otocœlus a syn.).
1915 A, 110, 128, 130.
Cummins, W. F. 1908 A, 745.
Geol. Mag. 1912 A, 520.
Goette, A. 1899 A, 426.
Gregory, W. K. 1917 B, 313, 317.
Hay, O. P. 1908 A, 29 (Otocœlus).
Hoepen, E. C. N. 1915 A, 140 (Dissorophus).
Huene, F. 1913 B, 379.
1913 G, 502.
Jaekel, O. 1922 A, 25.
Lakjer, T. 1927 A, 192.
Moodie, R. L. 1908 A, 30.
1909 E, 39.
Nopcsa, F. 1926 A, 635.
Schuchert, C. 1910 A, 570.
Stappenbeck, R. 1905 A, 430 (Otocœlus).
Sternberg, C. H. 1909 C, 242 (Otocœlus).
Watson, D. M. S. 1913 C, 346.
1919 B, 8, 50.
Williston, S. W. 1910 A, 259, 278.
1910 D, 532, 534, 535 (Dissorophus); 534 (Otocœlus).
1914 B, 51, 56.
1914 E, 121.
1916 B, 202.
Zittel and Broili 1911 A, 169 (Dissorophus, Otocœlus).

Zittel and Broili 1923 A, 170, 191, fig. 264.
Zittel and Eastman 1902 A, 181 (Otocœlus).

Dissorophus multicinctus Cope.

Hay, O. P. 1902 A, 420 (D. multicinctus, D. articulatus); 430 (Otocœlus testudineus, O. mimeticus).
Beede, J. W. 1907 A, 120 (Otocœlus testudineus, O. mimeticus).
Case, E. C. 1911 B, 54, 59, 115, 117, pl xiii, pl. xxiii, figs. 11, 12; text-figs. 10, 45 (Otocœlus testudineus, O. mimeticus as syns.).
1915 A, 97, 129, text-fig. 16 (D. articulatus, Otocœlus mimeticus as syns.).
Cummins, W. F. 1908 A, 744 (D. multicinctus; O. mimeticus; Otocœlus testudineus).
Gadow, H. 1901 B, 82.
Huene, F. 1913 B, 369 (D. mimeticus).
1922 G, 406 (Dissorophus).
Moodie, R. L. 1908 A, 30 (D. multicinctus, D. articulatus).
1911 C, 376.
1911 E, 241 (D. multicinctus; D. mimeticus).
1914 A, 18 (D. multicinctus); 23 (Otocœlus testudineus, O. mimeticus).
Williston, S. W. 1910 A, 277.
1910 D, 535, pls. i-iii.
1914 B, 56.
Permian (Clear Fork); Texas.

Cacops Willist. Type *C. aspidephorus* Willist.

Williston, S. W. 1910 A, 253, 278.
Abel, O. 1912 F, 385, 387.
1919 A, 256, 261, 279.
Anonymous 1912 A, 519, 520.
Broili, F. 1913 A, 97.
1913 C, 529.
1915 A, 574.
1915 C, 285.
1926 A, 208.
Case, E. C. 1911 B, 14, 62, 83, 119.
1912 A, 203.
1915 A, 110, 128, 129.
Case and Williston 1913 A, 7.
Geol. Mag. 1912 A, 519, 520.
Gregory, W. K. 1917 A, 381.
1917 B, 317.
Hoepen, E. C. N. 1915 A, 141.
Huene, F. 1912 D, 103.
1913 B, 379.
1913 G, 502.
1922 G, 453.
Jaekel, O. 1922 A, 22, 23.
Kingsley, J. S. 1925 A, 37, fig. 41.
Lakjer, T. 1927 A, figs. 73, 84.
Moodie, R. L. 1915 J, 318.
Morton, D. J. 1926 A, 413.
Nopcsa, F. 1923 E, 1047.
1923 H, 14, pl. v, fig. 1.
1926 A, 635.
Osborn, H. F. 1916 E, 613.
1917 B, 182, fig.
Romer, A. S. 1922 B, 543.
1928 C, 257.
Schmalhausen, J. 1917 A, 107.
Schuchert and Levene 1927 A, 290, fig.
Thorpe, M. R. 1928 A, 77.
Watson, D. M. S. 1913 C, 346.
1914 D, 167.
1916 E, 84.
1917 B, 2.
Watson, D. M. S. 1919 A, 286.
1919 B, 8, 50, 53, 65.
1926 A, 204, 241.
Williston, S. W. 1910 D, 526, 535.
1911 B, 42.
1914 A, 35, fig. 18.
1914 B, 51, 56.
1914 C, 68.
1914 E, 121.
1916 B, 202, fig. 43.
1918 B, 91, fig. 16.
1925 A, 25, 125, 126, 143, 159, figs. 11, 96, 130.
Zittel and Broili 1911 A, 169.
1923 A, 190.

Cacops aspidephorus Willist.

Williston, S. W. 1910 A, 253, pls. vi-xiv, xvii.
Abel, O. 1919 A, 254, figs. 195, 209, 210.
1920 A, 352, fig. 556.
1921 A, 250, fig. 92.
Broili, F. 1926 A, 208, figs. 2, 3.
Case, E. C. 1911 B, 63, 119, pls. xvii, xviii, pl. xix, fig. 1, pls. xx-xxii, pl. xxiii, figs. 1-10, pl. xxiv, fig. 3.
1915 A, 97, 129, text-fig. 17.
Frassetto, F. 1915 A, 14, fig. 6.
Gilmore, C. W. 1926 A, 21, 36, text-fig. 14.
Gregory, W. K. 1915 D, 375, fig. 15.
Jaekel, O. 1911 A, 114, fig. 129.
Lull, R. S. 1917 B, 493, fig. 146.
1918 C, 125, fig.
Lydekker, R. 1911 A, 688, pl. (C. aspidophorus).
Moodie, R. L. 1911 C, 377.
1911 E, 241.
Williston, S. W. 1910 D, 528, 535.
1914 B, 56.
1914 C, 62, fig. 4.
Zittel and Broili 1923 A, 181.
Permian (Clear Fork); Texas.

ASPIDOSAURIDÆ Case.

Case, E. C. 1910 A, 179.
Abel, O. 1919 A, 280.
Arldt, T. 1912 A, 656.
1916 A, 98, 142 ("aspidosauriden").
Broili, F. 1913 A, 98.
Case, E. C. 1910 A, 179.
Case, E. C. 1911 B, 14, 63, 80, 83, 116.
1915 A, 97, 107.
Case and Williston 1913 A, 7.
Huene, F. 1913 G, 507.
Watson, D. M. S. 1919 B, 65 (Aspidosaurinæ).
Williston, S. W. 1914 B, 56 (Aspidosaurinæ).
1916 B, 203 (Aspidosaurinæ).

ASPIDOSAURUS Broili. Type *A. chiton* Broili.

Broili, F. 1904 A, 40.
Abel, O. 1919 A, 280.
Amalitsky, V. P. 1924 B, 74.
Case, E. C. 1911 B, 14, 63, 83, pl. xix, fig. 2.
1915 A, 110, 130.
Jaekel, O. 1922 A, 25.
Osborn, H. F. 1916 E, 614.
1917 B, 182.
Watson, D. M. S. 1919 B, 7, 50.
Williston, S. W. 1910 A, 259, 271.
1910 D, 535.
1911 B, 12.
1911 D, 379.
1914 B, 56.
1915 A, 578.
1916 B, 203.
Zittel and Broili 1911 A, 169.
1923 A, 170, 190, fig. 263.

Aspidosaurus apicalis (Cope).

Hay, O. P. 1902 A, 422 (Zatrachys).
Broili, F. 1904 A, 43 (Zatractus).
Case, E. C. 1907 C, 665, fig. 1 (Zatrachys).
1911 B, 65, text-fig. 15.
1915 A, 97.
Cummins, W. F. 1908 A, 744 (Zatrachys).
Moodie, R. L. 1911 E, 240.
1914 A, 15.
Williston, S. W. 1910 A, 260 (Zatrachys).
1911 B, 135 (Syn? of Platyhystrix rugosus).
1914 B, 55.
Permian; New Mexico.

Aspidosaurus chiton Broili.

Broili, F. 1904 A, 40, pl. vi, figs. 6-19; text-fig. 2.
Case, E. C. 1911 B, 63, pl. v, fig. 5; text-fig. 13.
1915 A, 97, 130, text-fig. 18.
Moodie, R. L. 1911 E, 241.
1914 A, 15.

Williston, S. W. 1910 D, 535.
1914 B, 56.
Permian (Clear Fork); Texas.

Aspidosaurus crucifer Case.

Case, E. C. 1903 C, 399, fig. 5 (Zatrachys).
1907 C, 665, fig. 2 (Zatrachys).
1911 B, 66, text-fig. 15.
1915 A, 97, 130.
Moodie, R. L. 1914 A, 15.
Watson, D. M. S. 1919 B, 8 (A. cruciger).
Williston, S. W. 1910 A, 261 (Zatrachys).
1914 B, 55.
Permian (Wichita?, Clear Fork?); Texas: (Enid); Oklahoma.

Aspidosaurus glascocki Case.

Case, E. C. 1910 A, 179, text-fig. 9.
1911 B, 64, text-fig. 14.
1915 A, 97.
Moodie, R. L. 1914 A, 15.
Watson, D. M. S. 1919 B, 8.
Williston, S. W. 1911 B, 14.
1914 B, 55.
Permian (Clear Fork); Texas.

Aspidosaurus novomexicanus Willist.

Williston, S. W. 1911 B, 12, pl. xxxviii, fig. 1.
Case, E. C. 1915 A, 97.
Case and Williston 1913 A, 7, fig. 3.
Huene, F. 1913 B, 379.
Moodie, R. L. 1914 A, 15.
Watson, D. M. S. 1914 D, 167.
Williston, S. W. 1911 D, 379.
1914 B, 51, 56.
Permian; New Mexico.

Aspidosaurus sp. indet.

Wegeman, C. H. 1915 A, 25. Permian (Wichita); Oklahoma.

BROILIELLUS Willist. Type *B. texensis* Willist.

Williston, S. W. 1914 B, 49, 56.
Abel, O. 1919 A, 280.
Case, E. C. 1915 A, 110, 130.
Nopcsa, F. 1923 E, 1052.
Osborn, H. F. 1918 D, 687.
Watson, D. M. S. 1919 B, 7, 50, 53, 65.
Williston, S. W. 1915 B, 575.
1916 A, 165.
1916 B, 203, fig. 44.

Broiliellus peltatus Willist.

Williston, S. W. 1911 B, 13, pl. xxxii, fig. 7 (Aspidosaurus?).

Case, E. C. 1915 A, 97, 167.
Moodie, R. L. 1914 A, 15 (Aspidosaurus).
Williston, S. W. 1914 B, 54 (Aspidosaurus); 56 (Broiliellus).
Permian (Clear Fork); Texas.

Broiliellus texensis Willist.

Williston, S. W. 1914 B, 50, 56, figs. 1-3.
Case, E. C. 1915 A, 97, 130.
Gregory, W. K. 1920 A, 115, fig. 16.
Permian (Clear Fork); Texas.

ALEGEINOSAURUS Case. Type *A. aphthitos* Case.

Case, E. C. 1911 B, 14, 60, 83.
Case, E. C. 1915 A, 110, 128.
Watson, D. M. S. 1919 B, 7, 65.
Williston, S. W. 1914 B, 55, 56.
1916 B, 203.

Alegeinosaurus aphthitos Case.

Case, E. C. 1911 B, 60, fig. 12.

Case, E. C. 1907 C, 665, figs. 3-6 (Zatrachys apicalis?).
1915 A, 97.
Miner, R. W. 1925 A, 165, fig. 6.
Moodie, R. L. 1914 A, 14 (Algeinosaurus).
Williston, S. W. 1914 B, 56.
Permian (Clear Fork); Texas.

ZATRACHYDIDÆ Williston.

Williston, S. W. 1910 D, 535.
Abel, O. 1919 A, 281 (Zatrachydæ).
Jaekel, O. 1922 A, 25 (Zatrachydæ).
Watson, D. M. S. 1919 B, 66 (Zatrachydæ).
Williston, S. W. 1914 B, 55.
1916 B, 203.
Zittel and Broili 1923 A, 191 (Zatrachidæ).

ZATRACHYS Cope. Type *Z. serratus* Cope.

Hay, O. P. 1902 A, 422.
Abel, O. 1919 A, 281.
Arldt, T. 1916 A, 98.
Broili, F. 1904 A, 35, 43, 47, 49 (Zatrachis).
Broom, R. 1913 F, 592.
Case, E. C. 1911 B, 14, 47, 82, 113, text-fig. 43.
1915 A, 111, 128.
Cummins, W. F. 1908 A, 745.
Dollo, L. 1884 D, 88.
Gadow, H. 1901 B, 82 (Zatachys).
Lakjer, T. 1927 A, 195.
Lydekker, R. 1885 F, 10, 12.
Nopcsa, F. 1926 A, 635.
Schuchert, C. 1910 A, 570.
Stensiö, E. A. 1921 A, 142.
Watson, D. M. S. 1919 B, 9, 66.
Williston, S. W. 1910 A, 260.
1910 D, 532.
1915 A, 578.
1916 B, 204.
Zittel and Broili 1923 A, 191.

Zatrachys conchigerus Cope.

Hay, O. P. 1902 A, 422.
Beede, J. W. 1907 A, 120.
Case, E. C. 1911 B, 50.
1915 A, 97.
Cummins, W. F. 1908 A, 744.
Moodie, R. L. 1911 E, 240.
1914 A, 28.
Permian (Clear Fork); Texas.

Zatrachys microphthalmus Cope.

Hay, O. P. 1902 A, 422.
Abel, O. 1919 A, 282, fig. 211.
Beede, J. W. 1907 A, 120.
Broili, F. 1904 A, 43 (Zatrachis).
Broom, R. 1913 E, 531.
1913 F, 592, fig. 21.
Case, E. C. 1915 A, 128, text-fig. 15.
Cummins, W. F. 1908 A, 743.
Huene, F. 1913 B, 370, fig. 54.
Moodie, R. L. 1911 E, 240.
Permian (Clear Fork); Texas.

Zatrachys serratus Cope.

Hay, O. P. 1902 A, 422.
Beede, J. W. 1907 A, 119.
Broom, R. 1913 F, 594.
Case, E. C. 1911 B, 48, 113, text-figs. 8, 43.
1915 A, 97.
Cummins, W. F. 1908 A, 742.
Huene, F. 1922 G, 453.
Moodie, R. L. 1911 E, 240.
1914 A, 28.
Watson, D. M. S. 1919 B, 8 ("A." serratus).
Permian (Wichita); Texas.

PLATYHYSTRIX Willist. Type *Ctenosaurus rugosus* Case.

Williston, S. W. 1911 D, 379
Abel, O. 1919 A, 281 (Platyhystrix); 370 (Ctenosaurus).
Case, E. C. 1915 A, 111, 115, 122, 144.
Drevermann, F. 1915 A, 405 (Ctenosaurus).
Huene, F. 1919 A, 180.
Schuchert, C. 1910 A, 570 (Ctenosaurus).
Watson, D. M. S. 1919 B, 9, 66.
Williston, S. W. 1911 B, 135.
1915 A, 578.
1916 B, 204, fig. 45.

Platyhystrix rugosus (Case).

Case, E. C. 1910 A, 176 (Ctenosaurus).
1915 A, 99.
Williston, S. W. 1911 B, 135, pl. xxxvi, fig. 1; pl. xxxvii, fig. 6.
1911 D, 379.
Williston and Case 1913 A, 6.
Permian; New Mexico.

Platyhistrix sp. indet.

Cummins, W. F. 1908 A, 740 (Ctenosaurus).
Permian; Texas.

GONIOCARA, genus novum. Type *Goniocephalus willistoni* Broili.

Broili, F. 1913 A, 100 (Goniocephalus; preoccupied).
Williston, S. W. 1916 B, 208 (Goniocephalus).
The position of this genus is doubtful. It may be a reptile.

Goniocara willistoni (Broili).

Broili, F. 1913 A, 100, pl. ix, figs. 3, 4 (Goniocephalus).
Case, E. C. 1915 A, 99 (Goniocephalus).
Permian (Clear Fork); Texas.

Suborder LABYRINTHODONTES Meyer.

Meyer, H. 1842 A, 301.
Hay, O. P. 1902 A, 417 (Apœcospondyli, part).
Abel, O. 1921 A, 251 ("labyrinthodonten").
Allis, E. P. 1905 A, 494.
Amalitsky, V. P. 1924 A, 50 ("labyrinthodonts").
Arldt, T. 1907 D, 661 (Labyrinthodontidæ); 683 (Stereospondyli).
Arldt, T. 1912 A, 662, 663 (Labyrinthodontidæ).
1916 A, 100, 143 ("labyrinthodonten").
Brandt, J. F. 1865 A, 8 ("labyrinthodonten").
Branson, E. B. 1905 B, 568 (Labyrinthodontidæ).
Branson and Mehl 1928 B, 301 ("labyrinthodonts").

Branson and Mehl 1928 C ("labyrinthodonts").
Boulenger, G. A. 1902 F, 383 (Labyrinthodonta).
1904 C, 479, 480.
Broili, F. 1913 C, 530 (Stereospondyli).
1926 A, 213 ("labyrinthodonten").
Broom, R. 1899 A, 766 (Labyrinthodontia).
1903 E, 136 ("labyrinthodonts").
1903 G, 145 ("labyrinthodonts").
1903 I, 557 ("labyrinthodonts").
1909 B, 165 ("labyrinthodonts").
1911 A, 917 ("labyrinthodonts").
Carus, V. 1875 A, 485 (Labyrinthodontia).
Cope, E. D. 1880 U, 145 ("labyrinthodontes").
1891 N, 30 (Labyrinthodontidæ).
Dollo, L. 1884 D, 91.
1885 C, 306 (Labyrinthodonta).
Fraas, E. 1901 D, 318 (Labyrinthodon).
1913 A, 275 ("labyrinthodonten").
Gadow, H. 1901 B, 82 (Labyrinthodonta).
Gaupp, E. 1912 A, 563, 566 ("labyrinthodonten").
Gervais, P. 1859 A, 504 (Labyrinthodontia).
Giebel, C. G. 1855 A, 95 (Labyrinthodonta).
Green, J. R. 1861 A, 219, 227 (Labyrinthodontia).
Gregory, W. K. 1915 D, 365 (Stereospondyli).
Haeckel, E. 1868 A, 448 (Labyrinthodonta).
Heilprin, A. 1887 A, 310 (Labyrinthodontia).
Huene, F. 1902 A, 68 (Stereospondyli).
1913 G, 506 (Stereospondyli).
1920 C, 211 (Stereospondyli).
1922 G, 435 ("labyrinthodonten").
1926 A, 262 (Stereospondyli).
Huxley, T. H. 1865 C, 3 ("labyrinthodonts").
1870 F, 528 ("labyrinthodonts").
1872 A, 150, seq. (Labyrinthodontia).
1875 C, 751, 761 (Labyrinthodontia).
Jaekel, O. 1922 A, 11.
Jaekel and Philippi 1903 A, 14 (Labyrinthodontia).
Lankester, E. R. 1905 A, 246 ("labyrinthodonts").
Makowsky, A. 1876 A, 161 ("labyrinthodonten").
Matthew, G. F. 1903 A, 109 ("labyrinthodonts").
Meyer, H. 1845 C, 282 (Labyrinthodontes).
Miall, L. C. 1874 C, 417 (Labyrinthodonta).
Moodie, R. L 1908 B, 363 (Stereospondyli).
1908 G, 516, 520 (Stereospondylia).
1909 C, 121 (Stereospondyli).
1909 D, 243 (Stereospondyli).
1909 E, 39 (Stereospondyli).
Moodie, R. L. 1910 B, 721 (Labyrinthodontidæ).
1911 A, 494 (Labyrinthodontidæ).
1915 F, 189, 190 (Stereospondylia).
1915 H, 638 (Stereospondylia).
1916 A, 5, 35, 198 (Stereospondylia).
1922 B, 332 ("labyrinthodonts").
Newton, E. F. 1900 A, 645 (Labyrinthodontia).
Osborn, H. F. 1899 J, 415 (Stegocephala).
Owen, R. 1845 B, 195 (Labyrinthodontia); pls. lxiii-lxiv *b* ("labyrinthodonts").
1860 A, 158 (Labyrinthodontia).
1860 E, 183 (Labyrinthodontes).
1866 A, 14 (Labyrinthodontia).
1876 D, 69 (Labyrinthodontia).
Reynolds, S. H. 1897 A, 545, fig. 27 (Labyrinthodontia).
Romer, A. S. 1925 A, 180 (Labyrinthodontia).
Schwarz, H. 1908 A, 382 (Stereospondyli).
Seeley, H. G. 1879 A, 180.
1899 B, 69 ("labyrinthodonts").
1905 A, 219 ("labyrinthodonts").
Stensiö, E. A. 1921 A, 140 (Stereospondyli).
Stromer, E. 1912 A, 60 (Labyrinthodonti).
Sushkin, P. P. 1927 A, 270, 310 (Stereospondyli).
Terra, P. 1911 A, 225 (Labyrinthodonta).
Thevenin, A. 1910 A, 4 ("labyrinthodontes").
Tims, H. W. M. 1903 A, 133 (Labyrinthodonta).
Vogt, C. 1854 A, 677 ("labyrinthodontier").
Watson, D. M. S. 1917 C, 168, 181 (Labyrinthodontia); 169 (Stereospondyli).
1919 A, 237 (Labyrinthodontia).
1919 B, 21, 49, 50, 67 (Stereospondyli); 64 (Labyrinthodontia).
1919 C, 239 ("labyrinthodonts").
1921 A, 333 (Labyrinthodontia).
1921 C, 73 (Labyrinthodonta).
1926 A, 190, 194, 199 ("labyrinthodonts," Stereospondyli).
Wilckens, O. 1911 A, 708 ("labyrinthodonten").
Williston, S. W. 1905 D, 297 (Labyrinthodontia).
1909 A, 302 ("labyrinthodonts").
Wills, L. J. 1916 A, 5 ("labyrinthodonts").
Wiman, C. 1914 A, 1 ("labyrinthodonten").
1915 A, 1 ("labyrinthodonten").
Woodward, A. S. 1904 D, 170 ("labyrinthodonts").
1924 A, 117 ("labyrinthodonts").
Wyman, J. 1843 B, 131 ("labyrinthodonts").
Zittel, K. A. 1890 A, 397 (Stereospondyli).
Zittel and Broili 1911 A, 171 (Stereospondyli).
1923 A, 193 (Stereospondyli).

MASTODONSAURIDÆ Nicholson and Lydekker.

Nicholson and Lydekker 1889 A, 1035.
Hay, O. P. 1902 A, 423.
Carus, V. 1875 A, 486 (Mastodonsauria).
Gregory, W. K. 1917 B, 313.
Huene, F. 1913 G, 508 (Euglypta).
1920 F, 453, 464.
Huxley, T. H. 1863 C, 570 (Mastodontosauria).
Jaekel, O. 1922 A, 23.
Miall, L. C 1875 A, 149 (Euglypta).
Moodie, R. L. 1916 A, 198.
Quenstedt, F. A. 1861 A, 297 ("mastodonsaurier").
Terra, P. 1911 A, 226 (Mastodonsaurii).
Watson, D. M. S. 1919 B, 68.
Zittel and Broili 1923 A, 196.

MASTODONSAURUS Jaeger. Type *Salamandroides giganteus* Jaeger.

Hay, O P. 1902 A, 423.
Abel, O. 1912 F, 212.
1914 E, 392.
Abel, O. 1919 A, 247, fig. 191; 287, fig. 220.
Allis, E. P. 1919 B, 83.
Arldt, T. 1916 A, 100.

Branson, E. B. 1905 B, 568.
Broili, F. 1904 A, 33.
1904 D, 579.
1927 E, 20.
Bronn, H. G. 1849 A, 690.
Broom, R. 1908 D, 373.
Case, E. C. 1922 B, 24, text-fig. 6.
Credner, H. 1893 A, 673.
Dollo, L. 1885 C, 307.
Drevermann, F. 1920 A, 90, 104.
Fejérváry, G. J. 1921 C, 10.
Fraas, E. 1913 A, 279.
Gadow, H. 1896 A, 20 (This genus?).
Gaudry, A. 1885 B, 49.
Gaupp, E. 1894 A, 102.
1908 B, 524.
1912 A, 563.
Gervais, P. 1859 A, 506.
Giebel, C. G. 1855 A, 96, pls. xl, xli.
Hitchcock and Grier 1927 A, 192.
Huene, F. 1902 A, 14.
1909 D, 335, fig. 11.
1913 G, 505, figs. 7, 10.
1920 F, 453, figs. 10, 11.
1922 G, 449, 451, 458, figs. 2-12.
Huxley, T. H. 1862 A, liii.
1863 C, 568.
Jaeger, G. F. 1838 A, 547.
Jaekel, O. 1922 A, 12.
Kehrer, F. A. 1896 A, 353.
Kingsley, J. S. 1902 B, 333.
1925 A, 121, fig. 127.
Koken, E. 1893 B, 270.
Lakjer, T. 1927 A, 198.
Lucas, F. A. 1901 B, 376.
Lydekker, R. 1885 F, 6, 12.
Matthew, W. D. 1923 C, 405.
Meunier, S. 1903 A, 775 ("mastodonsaure").
Meyer, H. 1842 A, 301.
Miall, L. C. 1874 C, 418-435, pls. xxvi-xxviii.
1875 C, 23.
Miner, R. W. 1925 A, 161.
Moodie, R. L. 1910 B, 721.
1911 H, 239.
1912 E, 34.
1915 J, 318, fig. 7.
Nicholson and Lydekker 1889 A, 1035.
Nopcsa, F. 1923 E, 1052.
1926 A, 635.
Owen, R. 1845 B, 196, pl. lxiii, fig. 1 (Syn. of Labyrinthodon).
Romer, A. S. 1925 A, 180.
Schwarz, H. 1908 A, 322.
Seitz, A. L. L. 1907 A, 249.
Stickler, L. 1899 A, 85.
Sushkin, P. P. 1927 A, 314.
Thevenin, A. 1910 A, 36, fig. 21.
Watson, D. M. S. 1914 C, 396.
1916 E, 84.
1919 B, 36, 49, 60, fig. 22.
Wills, L. J. 1916 A, 16.
Wiman, C. 1914 A, 6, fig. 4.
Woodward, H. 1904 H, 143.
Zittel and Broili 1911 A, 172.
1923 A, 177, 196, figs. 274, 282, 300.

Mastodonsaurus sp. indet.

Hay, O. P. 1902 A, 423.
Branson, E. B. 1905 B, 595.
Dames, W. 1899 H, 152.
Lucas, F. A. 1901 B, 376. Triassic; Arizona.
Moodie, R. L. 1911 A, 495.
1911 H, 239.
1916 A, 198, pl. xxi, fig. 6.
Sauvage, H. E. 1901 B, 9 ("labyrinthodonte").
Watson, D. M. S. 1919 B, 21 (This genus?).

Dictyocephalus Leidy. Type *D. elegans* Leidy.

Hay, O. P. 1902 A, 423.
Arldt, T. 1916 A, 100.
Branson, E. B. 1905 B, 568, 590.
Huene, F. 1926 E, 6.
Zittel and Broili 1911 A, 171.

Dictyocephalus elegans Leidy.

Hay, O. P. 1902 A, 423.
Huene, F. 1920 F, 458.
Jaekel, O. 1922 A, 11.
Lyman, B. S. 1894 A, 207.
Moodie, R. L. 1911 A, 495.
1914 A, 17.
Schuchert, C. 1910 A, 579.
Watson, D. M. S. 1919 B, 48.
Triassic (Newark); North Carolina.

Eupelor Cope. Type *Mastodonsaurus durus* Cope.

Hay, O. P. 1902 A, 423.
Arldt, T. 1916 A, 100.
Branson, E. B. 1905 B, 568, 591.
Broili, F. 1921 A, 342.

Eupelor durus Cope.

Hay, O. P. 1902 A, 423.
Huene, F. 1921 B, 572, figs. 16-18. (This genus and species?).
Lyman, B. S. 1894 A, 212.
Moodie, R. L. 1911 A, 495.
1914 A, 19.
Watson, D. M. S. 1919 B, 48.
Triassic (Newark); Pennsylvania.

Pariostegus Cope. Type *P. myops* Cope.

Hay, O. P. 1902 A, 423.
Arldt, T. 1916 A, 100.
Branson, E. B. 1905 B, 592.

Pariostegus myops Cope.

Hay, O. P. 1902 A, 423.
Branson, E. B. 1905 B, 594.
Huene, F. 1920 F, 459.
Lyman, B. S. 1894 A, 207.
Moodie, R. L. 1911 A, 495.
1914 A, 24.
Schuchert, C. 1910 A, 579.
Watson, D. M. S. 1919 B, 48.
Triassic (Newark); North Carolina.

METOPOSAURIDÆ Watson.

Watson, D. M. S. 1919 B, 67.
Huene, F. 1920 F, 456, 464.
Jaekel, O. 1922 A, 11, 23.
Zittel and Broili 1923 A, 195.

METOPOSAURUS Lydekker. Type *Labyrinthodon diagnosticus* Owen.

Lydekker, R. 1890 A, 152 (To replace *Metopias* Meyer, preoccupied).
Abel, O. 1919 A, 257, 290, fig. 217 (Metopias).
1920 A, 352, fig. 554 (Metopias).
Amalitsky, V. P. 1921 A, 4.
1924 A, 50, 52.
Arldt, T. 1916 A, 100.
Case, E. C. 1922 B, 21, text-fig. 6.
Dollo, L. 1885 D, 630 (Metopias).
Drevermann, F. 1920 A, 94, 104 (Metopias).
Fejérváry, G. J. 1921 C, 10.
Fraas, E. 1889 A, 148 (Metopias).
Gaudry, A. 1885 B, 49 (Metopias).
1890 C, 171, fig. 265 (Metopias).
Huene, F. 1920 F, 456, fig. 13.
1922 G, 396, figs. 1, 36.
1922 H, 152.
Jaekel, O. 1911 A, 112 (Metopias).
1922 A, 5.
Kingsley, J. S. 1902 B, 333 (Metopias).
Lakjer, T. 1927 A, 192, 198 (Metopias).
Lucas, F. A. 1904 A, 193.
Meyer, H. 1842 A, 302 (Metopias).
Osborn, H. F. 1917 B, 183 (Metopias).
Owen, R. 1860 E, 196 (Labyrinthodon).
Sushkin, P. P. 1927 A, 314 (Metopias).
Watson, D. M. S. 1916 E, 85.
1919 B, 32, 50, figs. 18, 20.
1926 A, 191.
Williston, S. W. 1905 D, 297.
Zittel, K. A. 1890 A, 402, figs. 392, 393 (Metopias).
Zittel and Broili 1911 A, 172, fig. 304 (Metopias).
Zittel and Broili 1923 A, 195.
Zittel, Eastman, etc. 1902 A, 223, fig. 224 (Metopias).

Metoposaurus fraasi Lucas.

Lucas, F. A. 1904 A, 194, pl. iii.
Branson, E. B. 1905 B, 569, 589.
Broili, F. 1921 A, 342.
Case, E. C. 1915 A, 75.
1920 A, 2 (No name).
1922 B, 23, text-fig. 5.
Cross, W. 1908 A, 113.
Cross and Howe 1905 A, 480.
Darton, N. H. 1910 A, 42 (M. frassi).
Herbert, H. E. 1917 A, 34, 46.
Huene, F. 1920 F, 457.
1926 E, 3, 4, 6.
Lucas, F. A. 1901 B, 376 (Mastodonsaurus?).
Merrill, G. P. 1907 A, 74.
Moodie, R. L. 1911 A, 495.
1914 A, 22.
Zittel and Broili 1911 A, 172.
1923 A, 196.
Triassic (Chinle); Arizona.

Metoposaurus jonesi Case.

Case, E. C. 1920 A, 1-3, pl. i.
1922 B, pl. ii; text-fig. C (This genus?).
Huene, F. 1922 H, 149.
1926 E, 5.
Triassic (Dockum); Texas.

ANASCHISMA Branson. Type *A. browni* Branson.

Branson, E. B. 1905 B, 569, 570.
Abel, O. 1919 A, 285.
Allis, E. P. 1919 B, 82.
Amalitsky, V. P. 1924 A, 56.
Arldt, T. 1916 A, 100.
Broom, R. 1913 H, 73.
Case, E. C. 1922 B, 13, 21.
Gaupp, E. 1912 A, 565.
Huene, F. 1926 E, 4.
Jaekel, O. 1922 A, 14, 21.
Lakjer, T. 1927 A.
Moodie, R. L. 1910 B, 721.
1912 E, 34.
Versluys, J. 1912 B, 552.
Watson, D. M. S. 1912 B, 584.
1913 F, 957.
1919 B, 35, 50.
Wiman, C. 1914 A, 6, fig. 6 (Anachisma).
1916 B, 214.
Zittel and Broili 1911 A, 171.
1923 A, 196.

Anaschisma brachygnatha Branson.

Branson, E. B. 1905 B, 570, figs. 4, 9.
Huene, F. 1920 F, 458.
1922 H, 148.
1926 E, 4.
Jaekel, O. 1923 A, 11.
Moodie, R. L. 1908 G, 528.
Triassic (Popo Agie); Wyoming.

Anaschisma browni Branson.

Branson, E. B. 1905 B, 570, 585, figs. 1-8, 10.
Huene, F. 1920 F, 457.
1922 H, 148.
1926 E, 4.
Jaekel, O. 1922 A, 11, 12.
Moodie, R. L. 1908 G, 528, figs. 12, 14.
1911 A, 495.
1914 A, 14.
Versluys, J. 1912 B, 569, fig. W.
Triassic (Popo Agie); Wyoming.

BUETTNERIA Case. Type *B. perfecta* Case.

Case, E. C. 1922 B, 13.
Branson and Mehl 1928 C, 488.
Case, E. C. 1921 C, 445 (No description).

Buettneria perfecta Case.

Case, E. C. 1922 B, 13, pls. i-iv; text-figs. 1-3.
Branson and Mehl 1928 A, 325.
Case, E. C. 1921 C, 445 (No description).
1922 A, 445 (Nom. nud.).
1924 A, 423, pl. xxiii, fig. 2; pl. xxiv.
Huene, F. 1926 E, 5.
Triassic; Texas.

TYPOTHORAX Cope. Type *T. coccinarum* Cope.

Hay, O. P. 1902 A, 511.
Branson, E. B. 1905 B, 568.
Huene, F. 1922 H, 150, 152.
1926 E, 2.
Lydekker, R. 1912 C, 121.
Zittel and Broili 1911 A, 260.

Typothorax coccinarum Cope.

Hay, O. P. 1902 A, 511.
Cross, W. 1907 A, 640 ("Typothorax").
Cross and Howe 1905 A, 494.
Gregory and Camp 1918 A, 531, text-fig. 11.
Huene, F. 1915 A, 485, figs. 1-10.
1922 F, tab.
1926 E, 5, 7, 9, figs. 1, 2.
Merrill, G. P. 1907 A, 81.
Triassic (Dolores); New Mexico.

CALAMOPS Sinclair. Type *C. paludosus* Sinclair.

Sinclair, W. J. 1917 A, 319.

Calamops paludosus Sinclair.

Sinclair, W. J. 1917 A, 319, fig. 1.
Triassic (Newark); Pennsylvania.

Subclass LISSAMPHIBIA Haeckel.

Haeckel, E. 1866, Gen. Morphology.
Arldt, T. 1907 D, 663.
Gadow, H. 1898 A, 13.
Haeckel, E. 1868 A, 441.
1873 A, 512.

Order CAUDATI Duméril.

Unless otherwise indicated the authors, as quoted, apply to this order the name Urodela.

Duméril, A. M. C. 1806 A, 94 (Caudati).
Hay, O. P. 1902 A, 424.
Abel, O. 1912 F, 219, 706 ("urodelen").
1919 A, 324.
1920 A, 346.
1921 A, 144 ("urodelen").
Agar, W. E. 1906 A, 54 ("urodeles").
Ahlborn, F. 1896 B, 7 ("urodelen").
Allis, E. P. 1915 A, 616.
1923 A, 48.
Altmann, F. 1925 A, 88 ("urodelen").
Anderson, R. J. 1912 D, 251.
Anthony, R. 1912 A ("urodèles").
1913 A, 244 ("urodèles").
Anthony and Vallois 1914 A, 219 ("urodèles").
Arldt, T. 1907 D, 687.
1912 A, 668, 678.
1916 A, 101 ("urodelen").
Baird, S. F. 1850 B, 281, 283.
Baraldi, G. 1877 A, *passim* ("urodèles").
Bardeleben, K. 1889 A, 107 ("urodelen").
1889 B, 259.
1896 A, 114 ("urodelen").
1903 A, 23 ("urodelen").
1904 A, 109 ("urodelen").
Baur, G. 1887 H, 47 ("urodelen").
Beer, G. R. 1926 A, 307.
Bender, O. 1907 A, 39 ("urodelen").
Beyer, H. 1907 A, 267 ("urodelen").
Blainville, H. M. D. 1817 A, 107 ("reptiles nues").
Boas, J. E. V. 1914 B, 553 ("urodelen").
1914 C, 256 ("urodelen").
Bonaparte, C. L. 1832 A, 319.
Boulenger, G. A. 1902 F, 383 (Caudata).
Brauer, A. 1914 A, 284.
Braus, H. 1906 A, 238 ("urodelen").
Bridge, T. W. 1878 A, 725.
Broili, F. 1913 D, 351 ("urodelen").
Carter, J. T. 1905 A, 129, 140.
Carter, O. 1875 A, 73 ("urodelen").
Carus, V. 1875 A, 481.
Case, E. C. 1911 B, 14, 68.
1915 A, 97.
Cope, E. D. 1885 BB, 65.
1885 DD, 307.
1891 N, 28, 31.
Coyle, R. F. 1909 A, 582.
Cunningham and Boulenger 1912 A, 161, 211.
Dana, J. D. 1863 A, 1 ("tailed batrachians").
Davidson, A. 1895 A, 407.
Delsman, H. C. 1924 A, 155.
Dollo, L. 1884 D, 86 (Urodela).
1885 C, 303 ("urodèles").
Dombrowski, B. A. 1925 A, 72 ("urodelen).
Drüner, L. 1902 A, 435 ("urodelen").
1904 A, 273 ("urodelen").
1904 B, 361 ("urodelen").
1906 A, 7 ("urodelen").
Dunn, E. R. 1922 A, 418 (Caudata).
Ebner, V. 1896 A, 146 ("urodelen").
Edgeworth, F. H. 1920 A, 128.
1925 A, 225.
Eisler, P. 1895 A, 56 ("unrodelen").

Elliott, A. I. M. 1907 A, 648 ("urodeles").
Emery, C. 1890 A, 287 ("urodelen").
1895 A, 221 ("urodèles").
1897 D, 602 ("urodelen").
Fejérváry, G. J. 1920 A, 362 ("urodèles").
1925 A, 177 ("urodelen").
Frassetto, F. 1915 A ("urodeli").
Fuchs, H. 1907 C, 8 ("urodelen").
1909 B, 123, 148 ("urodelen").
1909 D, 8, 76 ("urodelen").
1910 A, 39 ("urodelen").
1911 A, 34 ("urodelen").
1911 B, 401 ("urodelen").
1912 D, 153 ("urodelen").
Fürbringer, M. 1902 A, 200 ("urodelen").
Gadow, H. 1901 B, 11, 94.
1902 B, 355.
1905 A, 200.
1914 A, 506 ("urodeles").
Gaupp, E. 1891 B, 110 ("urodelen").
1895 A, 57, seq. ("urodelen").
1899 A, 1034, 1038 ("urodelen").
1900 A, 571 ("urodelen").
1901 B, 944 ("urodelen").
1902 A, 224 ("urodelen").
1905 A, 286 ("urodelen").
1905 D, 936 ("urodelen").
1906 A, 24 ("urodelen").
1906 B, 688 ("urodelen").
1911 A, 401 ("urodelen").
1911 B, 115 ("urodelen").
1911 C, 437 ("urodelen").
1913 A, 23 ("urodelen").
Gebhardt, F. A. M. W. 1907 A, 78 ("urodelen").
Gegenbaur, C. 1870 A, 336 ("urodelen").
Gelderen, C. 1922 A, 234.
1923 A, 15.
1925 A, 501.
Gervais, P. 1859 A, 497 ("urodèles").
Goeppert, E. 1896 B, 3, fig. 2 ("urodelen").
Goette, A. 1879 A, 143 ("urodelen").
Goodrich, E. S. 1911 A, 101.
Gottlieb, H. 1914 A, 195 ("urodelen").
Gregory, W. K. 1912 D, 220 ("urodeles").
1915 D, 365.
1917 B, 316 (Caudata).
1925 A, 501.
Gregory and Adams 1915 A, 763 ("urodeles").
Grote, A. 1926 A, 458 ("uroden").
Haeckel, E. 1868 A, 449 (Sozara).
Hasse, C. 1892 C, 1 ("urodelen").
1893 B, 537 ("urodelen").
Hatschek, B. 1889 A, 86 ("urodelen").
1889 B, 116 ("urodelen").
Heilprin, A. 1887 A, 306.
Hertwig, O. 1874 B, ("urodelen").
Higgins, G. M. 1920 A, 293.
Hilzheimer, M. 1913 A, 475 ("urodeles").
Hoeven, J. v. d. 1866 A, 364.
Hoffmann, C. K. 1878 B, 615.
Howes, G. B. 1893 B, 272.
Howes and Swinnerton 1901 A, 17.
Huene, F. 1909 D, 333.
1922 G, 454 ("urodelen").
1926 A, 265.
Huxley, T. H. 1875 D, 24.
1879 A, 400 ("urodeles").
Ihering, H. 1880 A, 299 ("urodelen").
Iwanzoff, N. 1894 A, 579 ("urodelen").
Jacobshagen, E. 1920 A, 91 ("urodelen").
Jaekel, O. 1909 A, 194 ("urodelen").
1911 A, 129.
Johnson, A. 1883 A, 406.
Kapelkin, W. 1900 A ("urodelen").
Kehrer, F. A. 1896 A, 352 ("urodelen").
Kerr, J. G. 1900 A, 233.
1901 A, 694 ("urodeles").
1902 A, 424 ("urodeles").
1910 A, 204 ("urodeles").
Kingsbury, B. F. 1903 A, 313.
Kingsbury and Reed 1908 A, 81-91, text-figs. 1-7.
Kingsley, J. S. 1900 A, 205, 209 ("urodeles").
1901 B, 337.
1902 B, 323.
1925 A, 38, 122, 279.
Klaauw, C. J. 1924 B, 573.
Klein, E. E. 1868 A (Caudata).
Köstlin, O. 1844 A ("geschwänzte").
Koken, E. 1898 B, 143.
Kravetz, L. 1906 A, 6.
1911 A, 360 ("urodelen").
Lakjer, T. 1927 A, 201 ("urodelen").
Lavocat, A. 1885 A, 34 ("urodèles").
Lebedinsky, N. G. 1917 A, 316 ("unrodeles").
Leboucq, H. 1884 A, 85 ("urodèles").
Leche, W. 1887 A ("urodelen").
Leunis and Ludwig 1883 A, 623.
Leydig, F. 1887 A, 538 ("urodelen").
Lönnberg, E. 1910 A, 4.
Lubosch, W. E. 1908 A, 196 ("urodelen").
Meckel, J. F. 1825 A ("geschwänzte").
Mivart, St. G. 1871 B, 370 ("tailed batrachians").
Moodie, R. L. 1908 B, 361, 366 (Caudata).
1909 C, 118.
1909 D, 243 (Caudata; Euamphibia, in part).
1909 F, 220 (Caudata; Euamphibia, in part).
1912 A, 278 (Euamphibia, in part).
1912 B, 287 (Caudata).
1912 D, 326 (Caudata; Euamphibia, in part).
1915 F, 189, 190 (Caudata).
1915 H, 638.
1916 A, 45, 49 (Caudata; Euamphibia, in part); 45, 69 (Caudata).
Murray, J. A. 1897 A, 661.
Nauck, E. T. 1923 A, 15, figs. 2, 3.
Noble, G. K. 1921 A, 1 ("salamanders").
1922 A, 50, 57, table 1 (Caudata).
1925 C, 1.
Nopcsa, F. 1923 E, 1049, 1056.
1926 A, 643.
Okajima, K. 1908 A, 351 (Onychodactylus).
Oppel, C. A. 1811, Ordn. Rept., 72 (Caudata).
Oswald, F. 1911 A, 405 ("urodeles").
Parker, W. K. 1877 B, 529.
1879 C, 332, 339 ("urodeles").
1887 B, 53 ("urodeles").
Parker and Haswell 1897 A, 272.
Pehrson, T. 1922 A.
Perrin, A. 1896 A, 90 ("urodèles").

Perrin, A. 1899 A, 521 ("urodèles").
Peter, K. 1898 A ("urodelen").
Petronievics, B. 1921 A, 107 ("urodèles").
Pompeckj, J. F. 1912 A, 338, 344 ("urodelen").
Puccioni, N. 1908 A, 56 ("urodeli").
Rabl, C. 1901 A, 496 ("urodelen").
1903 A, 157 ("urodelen").
Reed, H. D. 1920 A, 325.
Reynolds, S. H. 1897 A, 134, 169, 174, 182, 184, 187.
Röse, C. 1894 C, 178-192 ("schwanzmolche").
Romer, A. S. 1922 B, *passim* ("urodeles").
Sabatier, A. 1896 A, 125 ("urodèles").
1897 B, 933 ("urodèles").
1902 A, 99 ("urodèles").
Schauinsland, H. 1906 A, 488 ("urodelen").
Schmalhausen, J. J. 1916 B, 138.
1917 B, 134.
Schönes, G. 1902 A, 8 ("urodelen").
Schuchert, C. 1915 A, 800.
Schwarz, H. 1908 A, 326 ("urodelen").
1908 B, 102 ("urodelen").
Seeley, H. G. 1876 C, 185.
1888 I, 235 ("urodeles").
Sewertzoff, A. 1896 A, 207.
1904 A, 484.
1908 A.
1926 D, 75 ("urodelen").
Seydel, O. 1899 A ("urodelen").
Shitkov, B. M. 1899 A, 246 ("urodelen").
Shore, T. W. 1887 A, 366 ("urodeles").
Sollas, W. J. 1920 A, 484, 524 ("urodeles").
Sonies, F. 1907 A, 405 ("urodelen").
Spencer, W. B. 1886 A, 173 ("urodeles").
Stadtmüller, F. 1925 A, 149-225 ("urodelen").
1926 A, 158, fig. 5 ("urodelen").
Steiner, H. 1921 A, 514 ("urodelen").
1922 A, 328.
Stejneger, L. 1907 C, 2 (Caudata).
Stejneger and Barbour 1917 A, 5 (Caudata).
Stöhr, P. 1880 A, 477.
Stromer, E. 1912 A, 56.
Sushkin, P. P. 1910 A, 241.
1927 A, 275 ("urodelous amphibians").
Taschenberg, O. 1894 A, 3531.
Terra, P. 1911 A, 222 (Caudata).
Thevenin, A. 1910 A, 37 ("urodèles").
Thyng, F. W. 1906 A, 40.
Ussow, S. 1900 A, 226.
Van Gelderen, C. 1925 A, 505 ("urodelen").
Versluys, J. 1912 B, 566 ("urodelen").
1912 C, 314.
1925 B, 182.
Vialleton, L. 1917 A, 190 ("urodèles").
Villiers, C. G. S. 1922 A ("urodelen").
Virchow, H. 1914 C, 132 ("urodelen").
Vitali, G. 1909 A, 208 ("urodeli").
Wagner, R. 1843 A, 146.
Wallace, A. R. 1876 A, ii, 411.
Watson, D. M. S. 1914 D, 168 ("urodeles").
1916 C, 632 ("urodeles").
1917 A, 982 ("urodeles").
1917 B, 57 ("urodeles").
1919 B, 58 ("urodeles").
1926 A, 190, 200.
Wegner, R. N. 1922 A, 417 ("urodelen").
Weitzel, A. 1865 A, 318 ("geschwänzte").
Wilder, I. W. 1920 A, 349 ("urodeles").
Williston, S. W. 1910 D, 534 (Caudata).
1912 B, 660.
1916 B, 211 (Caudata).
Winslow, G. M. 1898 A, 148.
Wintrebert, P. 1910 A, 1081 ("urodèles").
1910 B, 78, 131, 172 (urodèles").
Woodward, A. S. 1898 B, 139.
Zittel and Broili 1911 A, 174.
1923 A, 204.
Zittel, Eastman, etc. 1902 A, 135.

Suborder PROTEIDA Cope.

Cope, E. D. 1866 F, 102.
Arldt, T. 1916 A, 95, 105 ("proteiden").
Blainville, H. M. D. 1835 A, 281 ("protées").
Cope, E. D. 1885 DD, 305.
1889 D, 13, 21.
1891 N, 31.
Dollo, L. 1884 D, 86.
Dunn, E. R. 1922 A, 425, 427.
Hogg, J. 1841 A, 355 (Proteida).
Huxley, T. H. 1872 A, 150 (Proteida).
1875 C, 759, 770 (Perennibranchiata).
Moodie, R. L. 1916 A, 67.
Müller, J. 1832, Isis, 504 (Proteidea).
Stannius, H. 1856 A, 4 seq. (Proteida).
Stejneger and Barbour 1923 A, 1.
Tschudi, J. J. 1839 A, 26, 96 (Proteideæ).
The Proteidea of Müller is a heterogeneous group containing *Proteus*, *Axolotl*, *Menobranchus* (*Necturus*), and *Siren*.

COCYTINIDÆ.

Cope, E. D. 1875 X, 12.
Hay, O. P. 1902 A, 415 (Tuditanidæ, part).
Gregory, W. K. 1917 B, 313 (Cocyctinidæ); 316 (Coccytinidæ).
Moodie, R. L. 1912 D, 326.
1916 A, 67.

COCYTINUS Cope. Type *C. gyrinoides* Cope.

Hay, O. P. 1902 A, 416.
Broili, F. 1908 F, 60.
Case, E. C. 1917 A, 134.
1919 B, 200.
Gregory, W. K. 1917 B, 315 (Coccytinus).
Moodie, R. L. 1916 A, 67.
Schwarz, H. 1908 B, 70, 91.

Cocytinus gyrinoides Cope.

Hay, O. P. 1902 A, 416.
Moodie, R. L. 1912 D, 328.
1914 A, 16.
1916 A, 68, figs. 16, 16*a*.
Pennsylvanian (Linton); Ohio.

ERIERPETON Moodie. Type *E. branchialis* Moodie.

Moodie, R. L. 1912 D, 328.
1916 A, 69.

Erierpeton branchialis Moodie.

Moodie, R. L. 1912 D, 326, 329, pl. i, fig. 3; pl. ii, fig. 1.

Moodie, R. L. 1912 A, 278.
1914 A, 18.
1916 A, 70, pl. iii, fig. 4; text-fig. 15.
Pennsylvanian (Mazon Creek); Illinois.

HYPHASMA Cope. Type *H. lævis* Cope.

Hay, O. P. 1902 A, 416.
Broili, F. 1908 F, 59.
Case, E. C. 1917 A, 134.
1919 B, 200.
Moodie, R. L. 1908 F, 255.
1916 A, 70.

Hyphasma lævis Cope.

Hay, O. P. 1902 A, 416.
Baird, S. F. 1876 A, cci.
Moodie, R. L. 1914 A, 20.
1916 A, 71.
Pennsylvanian (Linton); Ohio.

Suborder MEANTES Linnæus.

Linnæus, C. 1766, Syst. Nat. ed. xii, pt. 2, sign. Rrrr 5, Addenda.
Cope, E. D. 1885 BB, 67 (Trachystomata).
1889 D, 13, 223 (Trachystomata).
Dunn, E. R. 1922 A, 427.
Hoffmann, C. K. 1878 B, 674 (Ichthyoidea, in part).
Huxley, T. H. 1875 C, 771 (Trachystomata).
Stannius, H. 1856 A, 4 seq. (Trachystomata).
Stejneger and Barbour 1917 A, 24.
1923 A, 21.

Superfamily SIRENOIDÆ, new name.

SIRENIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 69.
Amalitsky, V. P. 1924 A, 62 (Ichthyoides).
Anton, W. 1911 A, 179 ("sireniden").
Arldt, T. 1907 D, 681.
1916 A, 106 ("sireniden").
Bauer, G. 1885 M.
Bischoff, T. L. W. 1840 A, 3 ("sirènes").
1840 B, 118 ("sirènes").
Blainville, H. M. D. 1835 A, 282 (Sirena).
Bonaparte, C. L. 1832 A, 319.
1833 B, 186.
Boulenger, G. A. 1882 A, 86.
Brauer, A. 1914 A, 284.
Cope, E. D. 1875 X, 12, 24.
1889 D, 223.
1891 N, 31.
Cunningham and Boulenger 1912 A, 164, 169, 170.
Dunn, E. R. 1922 A, 422, 427.
Fejérváry, G. J. 1920 A, 352.
Gadow, H. 1901 B, 136.
Gill, T. 1885 B, 18.
Gray, J. E. 1850 A, 67.
Hoffmann, C. K. 1878 B, 615, 676.
Hogg, J. 1839 A, 274, 375, 376.
1841 A, 362.
Kingsbury, B. F. 1895 A, 131.
Kressmann, M. 1912 A, 399 ("sireniden").
Lobley, J. L. 1908 A, 203.
Noble, G. K. 1922 A, 61.
1924 A, 100.
1925 C, 2.
Owen, R. 1866 A, 15 (Proteidæ).
Palacký, J. 1899 B, 1 ("sirenen").
Pompeckj, J. F. 1912 A, 344.
Reed, H. D. 1920 A, 356.
Schmalhausen, J. J. 1916 B, 144.
Terra, P. 1911 A, 223.
Wallace, A. R. 1876 A, ii, 411.
Wintrebert, P. 1910 B, 173.

SIREN Linnæus. Type *S. lacertina* Linn.

Linnæus, C. 1766, Syst. Nat. Ed. 12 I, ii, sign. Rrrr, Addenda.
Abel, O. 1912 F, 414.
Arldt, T. 1916 A, 106.
Baird, S. F. 1850 B, 291.
Bardeleben, K. 1903 A, 25.
Boulenger, G. A. 1882 A, 86.
Brandt, F. 1865 A, 15.
Carlsson, A. 1886 A, 8.
Carus, V. 1875 A, 484.
Cope, E. D. 1875 D, 361.
1885 CC, 1226.
1885 G, 245 ("sirens").
1899 D, 225.
1900 A, 1214, 1219.
Cuvier, G. 1805 A.
Cuvier, G. 1834 A (1836), x, 332.
Drüner, L. 1904 B, 389.
Dunn, E. R. 1922 A, 420.
1924 A, 145.
Edgeworth, F. H. 1925 A, 231.
Gadow, H. 1901 B, 136.
Gaupp, E. 1913 A, 83.
Giebel, C. G. 1855 A, 99, pl. xlii, fig. 10.
Gill, T. 1886 C, 796.
Goeppert, E. 1896 B, 13, pl. i; text-figs. 13, 14.
Gray, J. E. 1850 A, 68.
Hasse, C. 1873 B, 614, 616.
Hasse and Schwarck 1870 A, 49.
Heilprin, A. 1887 A, 306, 311.
Hertwig, O. 1874 B.
Hoeven, J. v. d. 1866 A, 365.

Hoffmann, C. K. 1874 A, 8, 23, 24.
1878 B, 676, pls. vi, vii.
Hogg, J. 1839 A, 370.
Huxley, T. H. 1863 F, 428.
1872 A, 156, seq.
1874 B, 2, 9.
1875 C, 751-770.
Kingsbury, B. F. 1895 A, 131, pl. iii, figs. 30, 31.
Kingsbury and Reed 1909 A, 598.
Kingsley, J. S. 1925 A, 53, 262, fig. 57.
1902 B, 327, 329.
Klaauw, C. J. 1924 B, 576.
Köstlin, O. 1844 A.
Kressmann, M. 1912 A, 399.
Leunis and Ludwig 1883 A, 630.
Meckel, J. F. 1825 A.
Mivart, St. G. 1870 A, 262.
Noble, G. K. 1925 C, 3.
Norris, H. W. 1913 A, 516.
1913 B, 245.
Owen, R. 1845 B, 188.
1848 B, 125.
1866 A, 47, 179, 391.
1868 A, 908.
Parker, W. K. 1877 B, 572.
1882 C, 186.
Peter, K. 1898 A, 584.
Rabl, C. 1901 A, 511, pl. xxiii.
Reed, H. D. 1920 A, 356, pl. v.
Reynolds, S. H. 1897 A, 135, 168, 169, 174, 180, 187.
Schmalhausen, J. 1917 A, 106.
Sollas, W. J. 1918 A, 239.
Stannius, H. 1856 A, 4, seq.
Sutton, J. B. 1884 A, 567.
Tschudi, J. J. 1839 A, 69.
Vaillant, L. 1863 A, 294.
Versluys, J. 1912 C, 314.
Wagner, R. 1843 A.
Wallace, A. R. 1876 A, ii, 411.
Wiedersheim, R. 1877 B, *passim*.
Wilder, H. H. 1891 A, 653.

Siren lacertina Linnæus.

Linnæus, C. 1766, Syst. Nat. Ed. 12, I, ii. sign. Rrrr, Addenda.
Allis, E. P. 1898 A, 453.
Anthony and Vallois 1914 A, 224, figs. 2, 18.
Anton, W. 1911 A, 191, pls. iv, v.
Baird, S. F. 1850 B, 291.
Bischoff, T. L. W. 1840 A, 3 ("sirène").
1840 B, 119 ("sirène").
Boulenger, G. A. 1882 A, 87.
Cope, E. D. 1875 D, 361, fig. 6.
1885 CC, 1227.
1885 DD, 366, fig. 175.
1889 D, 226, pls. xliii, xliv; text-fig. 57.
1900 A, 1214, 1219.
Cunningham and Boulenger 1912 A, 164, pl. xiv.
Cuvier, G. 1825 A, v, 2, 417, pl. xxvii.
1827 A, 1 ("sirène lacertine").
1834 A (1836), x, 332.
Drüner, L. 1904 B, 648, figs. S, T.
Eimer, G. H. T. 1901 A, 21, 28.
Gadow, H. 1901 B, 136, fig. 27.
Gaupp, E. 1905 D, 955.
Gray, J. E. 1825 A, 216.
1850 A, 68.
Hay, O. P. 1917 E, 43.
1923 A, 382.
Hertwig, O. 1874 B, 14, pl. i, fig. 6.
Kingsbury and Reed 1909 A, 598, pl. ix.
Kressmann, M. 1912 A, 399, pl. xvii; text-figs. 1-16.
Lubosch, W. 1911 B, 741.
Mivart, St. G. 1870 A, 262, figs. 2, 3, 8, 9, 11, 14, 18.
Nopcsa, F. 1923 G, 147.
Norris, H. W. 1913 A, 516.
1913 B, 245, figs. 1-44.
Owen, R. 1845 B, 188, pl. lxii, figs. 5, 6.
1848 B, 125.
1866 A, 47.
Palacký, J. 1899 B, 6.
Parker, W. K. 1882 C, 187, 190, pl. xxxviii, figs. 5, 6; pl. xxxix, figs. 1-3.
Röse, C. 1894 C, 180, figs. 6-8.
Stejneger and Barbour 1917 A, 24.
Vaillant, L. 1863 A, 294, pls. vii-ix.
Wiedersheim, R. 1877 B, *passim*, pl. i, figs. 10-13; pl. ii, figs. 18-20.
Wilder, H. H. 1891 A, 653, pls. xxxix, xl.
Recent; southern States to Indiana and Peoria, Illinois: Pleistocene; Florida.

Suborder Mutabilia Merrem.

Merrem, B. 1820, Syst. Amphib., 166.
Bonaparte, C. L. 1831 A, 77 (Urodela).
Cope, E. D. 1866 F, 102 (Caducibranchiata).
1889 D, 303 (Pseudosauria, Trematodera, Amphiumoidea).
1889 R, 861 (Pseudosauria).
Drüner, L. 1904 B, 362 ("caducibranchiaten").
Dunn, E. R. 1922 A, 426 (Mutabilia, Salamandroidea).
Hoffmann, C. K. 1878 B, 674 (Ichthyoidea, in part).
Huxley, T. H. 1872 A, 150, 154 (Salamandridæ).
1876 F, 169 (Caducibranchiata).
Parker and Haswell 1897 A, 272 (Derotremata).
Stejneger, L. 1907 C, 3.
Stejneger and Barbour 1917 A, 6.
1923 A, 2.

Superfamily AMPHIUMOIDÆ, new form.

Cope, E. D. 1889 D, 33 (Amphiumoidea, Trematodera).
Stejneger, L. 1907 C, 3 (Amphiumoideæ).
Zittel and Broili 1911 A, 176 (Ichthyoidea).
1923 A, 205 (Ichthyoidea).

LYSOROPHIDÆ Williston.

Williston, S. W. 1908 D, 237, 240.
Abel, O. 1919 A, 326 (Paterosauridæ).
Amalitsky, V. P. 1924 A, 62.
Arldt, T. 1912 A, 656 (Paterosauridæ).
1916 A, 102, 143 ("lysorophiden").
Broili, F. 1904 A, 99 (Paterosauridæ).

Broili, F. 1904 D, 587 (Paterosauridæ).
1908 E, 295 (Paterosauridæ).
Case, E. C. 1911 B, 14, 68, 84, 141.
1915 A, 97.
Huene, F. 1913 B, 374.
1913 G, 505.
1926 A, 262.
Moodie, R. L. 1909 C, 116.
Pompeckj, J. F. 1912 A, 339, 344 (Lysorophidæ, Paterosauridæ).
Sollas, W. J. 1918 A, 239, figs. 4, 5.
1920 A, 482.
Stromer, E. 1912 A, 56 (Paterosauridæ).
Williston, S. W. 1908 F, 317 (Paterosauridæ).
1910 D, 534.
1916 B, 211.
Zittel and Broili 1911 A, 217 (Paterosauridæ).
1923 A, 265, 379, 383 (Paterosauridæ).

LYSOROPHUS Cope. Type *L. tricarinatus* Cope.

Hay, O. P. 1902 A, 433.
Abel, O. 1920 A, 354.
Amalitsky, V. P. 1921 A, 9.
1924 A, 57.
Arldt, T. 1912 A, 656.
1916 A, 102.
Broili, F. 1904 A, 80, 94, 98, text-fig. 5.
1904 D, 586.
1908 B, 269.
1908 E, 290.
1913 A, 98.
1913 B, 520.
1913 D, 350.
Broom, R. 1910 A, 214.
1918 A, 232.
Case, E. C. 1902 C, 257.
1908 A, 531.
1911 B, 14, 68, 84, 141.
1912 A, 203.
1915 A, 131, 132.
Drevermann, F. 1920 A, 101.
Finney, M. 1912 A, 664.
Gilmore, C. W. 1927 G, 11.
Gregory, W. K. 1917 B, 315.
Huene, F. 1913 B, 322, 372, 377.
1913 C, 389.
Jaekel, O. 1909 A, 210.
Kingsley, J. S. 1925 A, 128, fig. 135.
Matthew, W. D. 1923 B, 109.
Mehl, M. G. 1912 C, 408.
Moodie, R. L. 1909 C, 117.
1911 C, 382.
1912 D, 328.
1915 G, 370, 373.
Pompeckj, J. F. 1912 A, 339, 342, 346.
Sollas, W. J. 1918 A, 239, figs. 4, 5.
1920 A.
Steinmann, G. 1908 A, 210.
Stromer, E. 1912 A, 56.
Watson, D. M. S. 1917 C, 170.
Williston, S. W. 1908 D, 230.
1908 F, 317.
Williston, S. W. 1909 A, 394.
1909 E, 194.
1912 B, 660.
1912 F, 92.
1913 A, 825.
1914 C, 59.
1915 A, 578.
1916 B, 211, fig. 54.
Zittel and Broili 1911 A, 218.
1923 A, 266.

Lysorophus tricarinatus Cope.

Hay, O. P. 1902 A, 433.
Abel, O. 1919 A, 326, figs. 249-251.
1920 A, 354, figs. 561, 562.
Broili, F. 1904 A, 94, pl. xii, figs. 1-10.
1904 D, 586, figs. 12-14.
1908 E, 291, figs. 1, 2.
1913 A, 100.
1913 B, 520.
Broom, R. 1918 A, 232, figs. 1-3.
Case, E. C. 1900 A, 714, pl. ii, fig. 12.
1902 A, 45, pl. ix, figs. 1, 2.
1902 C, 256, pl. i, fig. 1.
1908 A, 531, fig. 1.
1911 B, 68, 141, text-figs. 47, 48.
1915 A, 97, 125, text-fig. 13.
Cope and Matthew 1915 A, pl. iii, figs. 19, 20.
Huene, F. 1913 B, 322, figs. 7-10.
1913 C, 393, figs. 1-5.
Jaekel, O. 1909 A, 208, figs. 14, 15.
1911 A, 127, fig. 142.
Moodie, R. L. 1909 C, 117.
1914 A, 21.
Pompeckj, J. F. 1912 A, 338, fig. 1.
Sternberg, C. H. 1909 C, 258.
Williston, S. W. 1908 D, 229, 230, text-figs. 1-3.
1908 F, 316.
Zittel and Broili 1911 A, 218, fig. 357.
1923 A, 265, fig. 373.

Permian (Wichita); Texas: Pennsylvanian (Upper); Illinois.

AMPHIUMIDÆ Gray.

Gray, J. E. 1825 A, 216.
Abel, O. 1919 A, 330.
Arldt, T. 1907 D, 637.
1916 A, 104 ("amphiumiden").
Bonaparte, C. L. 1833 B, 1186.
Boulenger, G. A. 1882 A, 80.
Cope, E. D. 1866 F, 104 (Amphiumidæ); 105 (Protonopsidæ).
1869 B, 152.
1875 X, 12.
1885 DD, 308.
1886 X, 442.
Cope, E. D. 1889 D, 213.
Cunningham and Boulenger 1912 A, 163, 169, 170.
Dunn, E. R. 1922 A, 422, 426.
Gadow, H. 1901 B, 97.
Gill, T. 1885 B, 18.
Gray, J. E. 1850 A, 54.
Hoffmann, C. K. 1878 B, 615, 675.
Huxley, T. H. 1875 C, 770 (Amphiumida).
Kingsbury, B. F. 1895 A, 130.
Kingsley, J. S. 1892 A, 674.
1892 B, 329.
Lobley, J. L. 1908 A, 203.

Lydekker, R. 1890 A, 137.
Noble, G. K. 1922 A, 62 ("amphiumids").
Owen, R. 1868 A, 860 (Amphiuma).
Palacký, J. 1899 B, 1 ("amfiumen").
Reed, H. D. 1920 A, 350, 371.
Ryder, J. A. 1879 C, 14.
Schmalhausen, J. J. 1916 B, 144.
Terra, P. 1911 A, 223.
Wallace, A. R. 1876 A, ii, 412.

AMPHIUMA Garden. Type *A. means* Garden.

Garden, A. 1821, in Smith's Correspondence of Linnæus, 1, 599.
Abel, O. 1912 F, 414.
Adams, L. A. 1919 A, 86, pl. v.
Arldt, T. 1916 A, 104.
Baird, S. F. 1850 B, 290.
Bardeleben, K. 1901 A, 31.
1903 A, 25.
Baur, G. 1885 M.
1897 D, 42.
Boulenger, G. A. 1882 A, 82.
Carus, V. 1875 A, 483.
Cope, E. D. 1866 F, 104.
1869 B, 152.
1875 D, 361.
1885 G. 245 ("amphiuma").
1885 DD, 309.
1886 X, 442.
1889 D, 215.
Cuvier, G. 1827 A, 1.
Davidson, A. 1895 A, 375.
1897 A, 6, figs. 1-7.
Drüner, L. 1904 B, 374.
Dunn, E. R. 1922 A, 420, 422.
1924 A, 145.
Edgeworth, F. H. 1920 A, 128.
1925 A, 231.
Eimer, G. H. T. 1901 A, 256.
Field, H. H. 1895 A, 340, pl. xiii, figs. 16, 18-21.
Gadow, H. 1896 A, 10.
1901 B, 100.
Gaupp, E. 1899 A, 1041.
1905 D, 959.
1906 B.
Giebel, C. G. 1855 A, 98, pl. xlii, fig. 4.
Gray, J. E. 1825 A, 217.
1850 A, 55 (Amphiuma, Murænopsis).
Gregory and Adams 1915 A, 763.
Hay, O. P. 1888 A, 315.
1889 A, 286.
1890 A, 11.
Heilprin, A. 1887 A, 306, 311.
Hertwig, O. 1874 B, 17.
Higgins, G. M. 1920 A, 296.
Hoeven, J. v. d. 1866 A, 367, 375.
Hoffmann, C. K. 1874 A, 8, 18, 24, 30.
1878 B, 675, pls. vi, vii, xv.
Hogg, J. 1839 A, 370.
Howes, G. B. 1893 B, 278.
Huxley, T. C. 1872 A, 157 seq.
1874 B, 9, 12.
1875 C, 758.
Kingsbury, B. F. 1903 A, 331.
Kingsbury and Reed 1908 A, 82.
1909 A, 596.
Kingsley, J. S. 1892 A, 671.
1897 A, 436.
1900 A, 211.
1901 B, 337. 1902 A.
Kingsley, J. S. 1902 B, 323.
1912 B, 82, fig. 82.
1925 A, 124, fig. 131.
Kingsley and Ruddick 1889 A, 219.
Klaauw, C. J. 1924 B, 577.
Köstlin, O. 1844 A.
Kravetz, L. 1911 A, 360.
Kressman, M. 1912 A, 426.
Leunis and Ludwig 1883 A, 629.
Meyer, H. 1860 E, 50.
Mivart, St. G. 1870 A, 262.
Nopcsa, F. 1923 G, 124, 147.
Norris, H. W. 1903 A, 69.
1908 A, 527.
1913 A, 517.
Owen, R. 1845 B, 190.
1848 B, 102, 125, 199, pl. ii.
1866 A, 5, 163, 170, 182, fig. 101.
1868 A, 860.
Parker, W. K. 1882 D, 209.
Parker and Haswell 1897 A, 274, fig. 888.
Peter, K. 1898 A, 569, 597.
Rabl, C. 1901 A, 509, pl. xxiii.
Reed, H. D. 1920 A, 351, pl. iii, text-figs. 15, 16.
Reynolds, S. H. 1897 A, 135, 174, 187, 188.
Ryder, J. A. 1879 C, 14 (Amphiuma, Murænopsis).
1887 A, 365.
Schauinsland, H. 1906 A, 498.
1916 A, 110.
Sollas, W. J. 1920 A, 499.
Stannius, H. 1856 A, 4, seq.
Thyng, F. W. 1906 A, 47, fig. D.
Van Pee, P. 1903 A, 37, figs. 1-5.
1904 A, 476.
Versluys, J. 1912 C, 314.
Wagner, R. 1843 A.
Watson, D. M. S. 1916 C, 632.
Wiedersheim, R. 1877 A.
1877 B, *passim*.
1902 A, 47, pl. vi, fig. 4.
Winslow, G. M. 1898 A, 149, 180.

Amphiuma means Garden.

Garden, A. 1821, in Smith's Correspondence of Linnæus, 1, 599 (descrip. 333).
Anton, W. 1911 A, 184.
Baird, S. F. 1850 B, 290 (A. means, A. tridactylum).
Boulenger, G. A. 1882 A, 82 (A. tridactyla); 83 (A. means).
Cope, E. D. 1875 D, 353, fig. 1.
1885 DD, 308.
1886 X, 442, pl. vi.
1889 D, 216, pl. ix, fig. 7; pl. x; pl. xi, figs. 2-9; pl. xii; pl. xiii, fig. 5; text-figs. 55, 56.
Cunningham and Boulenger 1912 A, 163, pl. xiv.
Cuvier, G. 1825 A, v, 2, 419, pl. xxvii.

Cuvier, G. 1827 A, 4, pl. i, figs. 1-3, pl. ii, figs. 1-8, 15-18 (A. means); 7, pl. i, figs. 4-6; pl. ii, figs. 9-14 (A. tridactylum).
Davidson, A. 1895 A, 375, pls. xxiii, xxiv.
Drüner, L. 1904 B, 626, pl. xxiii (A. tridactylum).
Edgeworth, F. H. 1925 A, 229 (A. tridactylum).
Gadow, H. 1901 B, 100, fig. 18.
Gray, J. E. 1825 A, 217.
1850 A, 55 (A. means, Murænopsis tridactyla).
Hay, O. P. 1888 A, 315.
1889 A, 286.
1890 A, 11, pl. ii.
1917 E, 43.
1923 A, 382.
Holbrook, J. E. 1842, N. Amer. Reptiles, v, 89, pl. xxx.
Kingsbury, B. F. 1903 A, 325.
Kingsbury and Reed 1909 A, 596, text-figs. 18-21.
Kingsley, J. S. 1892 A, 671.
Mivart, St. G. 1870 A, 262, figs. 1, 4, 5, 7, 16, 17, 19.
Morgan, T. H. 1903 A, 293.
Norris, H. W. 1908 A, 527, pls. iv-viii.
Owen, R. 1845 B, 191, pl. lxii, fig. 7 (A. means, A. tridactylum).
1866 A, 182 (A. tridactylum).
Palacký, J. 1899 B, 6 (Anfiuma).
Röse, C. 1894 C, 180, figs. 3, 11.
Shufeldt, R. W. 1883 D, 159, figs. 1-4 (Murænopsis tridactylus).
Wiedersheim, R. 1877 A, pls.
1877 B, *passim*, pl. i, figs. 7-9; pl. ii, fig. 17; pl. iv (A. tridactylum).
Wilder, H. H. 1891 A, 654 (A. tridactyla).
Winslow, G. M. 1898 A, 164.
Recent; Virginia to Florida and Louisiana: Pleistocene; Florida.

CRYPTOBRANCHIDÆ Cope.

Cope, E. D. 1889 D, 33, 34, 36.
Amalitsky, V. P. 1924 A, 62 (Ichthyoides).
Bauer, G. 1885 M (Menopomidæ).
Beyer, H. 1907 A, 268 ("menopomiden").
Carus, V. 1875 A, 483 (Cryptobranchia).
Dunn, E. R. 1922 A, 423, 424, 427.
Hoffmann, C. K. 1878 B, 674 (Menopomidæ).
Hogg, J. 1839 A, 274, 374, 375 (Menopomatidæ).
1841 A, 355 (Derotremata).
Kingsbury, B. F. 1895 A, 123.
Kingsbury and Reed 1909 A, 591.
Lobley, J. L. 1908 A, 203 (Menopomidæ).
Müller, J. 1832 A, 504 (Derotremata).
Noble, G. K. 1922 A, 49, 61.
1925 C, 1.
Reed, H. D. 1920 A, 327, 366.
Stejneger, L. 1907 C, 3.
Stejneger and Barbour 1917 A, 7.
Terra, P. 1911 A, 223 (Menopomidæ).
Wallace, A. R. 1876 A, ii, 412 (Menopomidæ).
Zittel, K. A. 1890 A, 418 (Cryptobranchia).

CRYPTOBRANCHUS Leuckart. Type *C. alleganiensis* Daudin.

Leuckart, C. G. F. R. 1821, Isis, Lit. Anz., 259.
Adams, L. A. 1919 A, 85, pl. v.
Altmann, F. 1925 A, 87.
Anton, W. 1911 A, 184.
Aridt, T. 1916 A, 104.
Beer, G. R. 1926 A, 308.
Beyer, H. 1907 A, 268 (Menopoma).
Boulenger, G. A. 1882 A, 81.
Bronn, H. G. 1838 A, 1166.
Cope, E. D. 1866 F, 105 (Protonopsis).
1875 D, 363 (Protonopsis).
1889 D, 37.
Drüner, L. 1904 B, 374 (Cryptobranchus, Menopoma).
Dunn, E. R. 1922 A, 419.
Edgeworth, F. H. 1920 A, 128, figs. 32-56 (Menopoma).
1923 B, 97, figs. 1-10 (Cryptobranchus, Menopoma).
1923 C, 238, figs. 1-7 (Cryptobranchus, Menopoma).
1925 A, 229, figs. 53-63 (Cryptobranchus, Menopoma).
Emery, C. 1901 A, 673, fig. 12.
Field, H. H. 1895 A.
Fleissig, J. 1909 A, 48, figs. 1-5.
Forbes, W. A. 1879 A, 364 ("menopoma").
Frasetto, F. 1915 A, 16, 149, fig. 89.
Gadow, H. 1896 A, 10, fig. 14 (Menopoma, Cryptobranchus).
1901 B, 97.
Gaupp, E. 1898 B, 866.
1899 A, 1041 (Menopoma).
1905 D, 931, 955, figs. 20, 21 (Cryptobranchus, Menopoma).
1913 A, 85.
Giebel, C. G. 1855 A, 98 (Menopoma).
Gray, J. E. 1825 A, 217 (Abranchus).
1850 A, 53 (Protonopsis).
Gregory, W. K. 1920 A, 224.
Harlan, R. 1825, Ann. Lyc. Nat. Hist. N. Y., i, 270 (Menopoma).
Hase, A. 1913 A, 149, fig. 71 (Menopoma).
Hatcher, J. B. 1903 A, 20 (Menopoma).
Heilprin, A. 1887 A, 306, 311 (Menopoma).
Hertwig, O. 1874 B, 17 (Menopoma).
Higgins, G. M. 1920 A, 294.
Hoeven, J. v. d. 1866 A, 367, 371 (Menopoma, Cryptobranchus).
Hoffmann, C. K. 1874 A, 17, 22, 24, 29 (Cryptobranchus, Menopoma).
1878 B, 674, pls. i, ii, vi-xiv (Menopoma, Cryptobranchus).
Hogg, J. 1839 A, 370 (Menopoma).
Holbrook, J. E. 1842 (1844), N. Amer. Rept., v, 95 (Menopoma).
Howes, G. B. 1893 B, 271.
Huxley, T. H. 1874 B, 9, 12 (Menopoma).
1875 A, 40 (Menopoma).
1875 C, 752-770, figs. 1-3 (Cryptobranchus, Menopoma).
1877 A, 58 (Menopoma).

Iwanzoff, N. 1894 A, 582 (Menopoma).
Kesteven, H. 1916 A, 305.
1919 A, 224, fig. 2.
Kingsbury, B. F. 1895 A, 123.
1903 A, 326.
Kingsbury and Reed 1909 A, 591.
Kingsley, J. S. 1900 A, 211.
1925 A, 263, figs. 44, 132, 281, 302.
Klaauw, C. J. 1924 B, 574 (Menopoma).
Köstlin, O. 1844 A (Menopoma).
Kressman, M. 1912 A, 426.
Lakjer, T. 1927 A, 332 (Cryptobranchus, Menopoma).
Leunis and Ludwig 1883 A, 629 (Menopoma, Cryptobranchus).
Lobley, J. L. 1908 A, 214 (Menopoma).
Lubosch, W. 1911 B, 741 (Menopoma).
Lubsen, J. 1905 A, 432, figs. 1-3.
Malbranc, M. 1875 A (Menopoma, Cryptobranchus).
Meyer, H. 1860 E, 50 (Menopoma).
Mivart, St. G. 1870 A, 264 (Cryptobranchus, Menopoma).
Mivart and Clark 1879 A, 524, text-fig. 5.
Moodie, R. L. 1907 A, 90 (Menopoma).
1915 F, 189.
Noble, G. K. 1922 A, 47.
1925 C, 1.
Osawa, G. 1901 A, 225-427, pls. xi-liv.
Owen, R. 1845 B, 191 (Menopoma, Sieboldtia).
1848 B, 50, 159, fig. 28 (Menopoma).
1866 A, 48, 170, 390, figs. 43, 265.
Parker, W. K. 1877 B, 571 (Menopoma).
1879 C, 335 (Menopoma).
1882 C, 172, pls. xxxvi, xxxvii (Sieboldia); 178 (Menopoma).
1882 D, 208, 209 (Cryptobranchus, Menopoma).
Parker and Bettany 1877 A, 131 (Menopoma).
Parker and Haswell 1897 A, 274.
Peter, K. 1898 A, 577, 584 (Menopoma).
Petronievics, B. 1921 A, 107 ("cryptobranches").
Rabl, C. 1901 A, 498, pl. xxiii (Cryptobranchus, Menopoma).
Reynolds, S. H. 1897 A, 135, 175.
Romer, A. S. 1922 B, 562, 569.
Schmalhausen, J. 1910 A, 439.
1917 B, 134 (Cryptobranchus, Menopoma).
Schöne, G. 1902 A, 8.
Seeley, H. G. 1876 A, 175, 185 (Menopoma).
Sewertzoff, A. N. 1908 A.
Shimada, K. 1911 A, 1-9, pls. i-iv.
Sollas, W. J. 1916 A, 110.
1920 A, 518, 524.
Stannius, H. 1856 A, 4, seq. (Menopoma).
Steiner, H. 1921 A, 519.
1922 A, 340.
Stejneger, L. 1901 A, 308.
Stejneger and Barbour 1917 A, 7.
Taschenberg, O. 1894 A, 3536.
Versluys, J. 1912 C, 323.
Villiers, C. G. S. 1922 A, 166 (Menopoma).
Wagner, R. 1843 A (Menopoma).
Watson, D. M. S. 1916 C, 632.
1917 B, 57.
Wiedersheim, R. 1877 B, *passim*.
1877 C, 152 (Menopoma, Cryptobranchus).
Wiedersheim, R. 1880 D, 582 (Menopoma, Cryptobranchus).
1892 A, 48, pl. vi, fig. 5 (Menopoma).
Wiman, C. 1923 B, 275, fig. 3.
Woodward, A. S. 1904 D, 142.
Zittel and Broili 1911 A, 176.
1923 A, 205, fig. 311.
Zwick, W. 1897 A, 65, fig. 2 (Menopoma).

Cryptobranchus alleganiensis (Daudin).

Daudin, F. M. 1802, Hist. Nat. Rept., viii, 231 (Salamandra).
Anton, W. 1911 A, 195 (Menopoma alleghaniense).
Beyer, H. 1907 A, 269 (Menopoma).
Boulenger, G. A. 1882 A, 81 (C. alleghaniensis).
Cope, E. D. 1869 E, 178 ("Menopoma." This species?).
1875 D, 363, fig. 8 (Protonopsis horrida).
1875 X, 25 (Menopoma allegheniensis).
1885 DD, 308, fig. 177 (Protonopsis horrida).
1889 D, 38, pls. v-viii, text-fig. 5 (C. allegheniensis).
Cunningham and Boulenger 1912 A, 163 (C. alleghaniensis).
Cuvier, G. 1825 A, v, 2, 409, pl. xxvi (Salamander gigantea).
Drüner, L. 1904 B, 443, pl. xiv, fig. 1; pls. xxi, xxii; text-fig. F (Menopoma alleghaniense).
Gadow, H. 1901 B, 97, fig. 17 (C. alleghaniensis).
Gaupp, E. 1899 A, 1041, fig. 4 (Menopoma alleghaniense).
Gray, J. E. 1825 A, 217 (Abranchus alleganensis).
1850 A, 57 (Protonopsis horrida).
Hatcher, J. B. 1903 A, 21, fig. 5 (Menopoma allegheniensis).
Hoeven, J. v. d. 1866 A, 371 (C. alleghaniensis).
Holbrook, J. E. 1842 (1844), N. Amer. Rept., v, 95, pl. xxxii (Menopoma alleghaniensis).
Kingsbury, B. F. 1895 A, 123, pl. v, figs. 39, 40.
Kingsbury and Reed 1909 A, 591, pls. vii, viii (C. allegheniensis).
Low, J. W. 1926 A, 913, figs. 1-4 (Menopoma).
Mivart, St. G. 1870 A, 264 ("Menopoma").
Owen, R. 1845 B, 191, pl. lxii, fig. 1 (Menopoma alleghanniense).
Palacký, J. 1899 B, 6 (C. aleganiensis).
Parker, W. K. 1882 C, 178 pl. xxxviii, figs. 1-3; pl. xxxix, figs. 4-6 (Menopoma alleghaniensis).
Pompeckj, J. F. 1912 A, 341.
Reese, A. M. 1906 A, 287, figs. 1-14 (C. allegheniensis).
Wiedersheim, R. 1877 B, *passim*, pl. ii, figs. 23-25 (Cryptobranchus, Menopoma alleghaniense).
1877 C, 153, figs. 3-5 ("menopoma").
Wilder, H. H. 1891 A, 654 (Menopoma alleg.).
Recent; eastern United States: Pleistocene (Cave deposits); West Virginia.

Cryptobranchus sp. indet.

Hay, O. P. 1923 A, 322, 353. Pleistocene; Pennsylvania, Virginia.
Peterson, O. A. 1926 A, 251, text-fig. 1. Pleistocene; Pennsylvania.

PLICAGNATHUS Cook. Type *P. matthewi* Cook.

Cook, H. J. 1917 A, 213.
Matthew, W. D. 1918 A, 188, 226.
Zittel and Broili 1923 A, 206.

Plicagnathus matthewi Cook.

Cook, H. J. 1917 A, 213.
Matthew, W. D. 1918 A, 188, 226.
1924 C, 68.
Upper Miocene (Lower Snake Creek); Nebraska.

SALAMANDROIDÆ, new form.

Cope, E. D. 1889 D, 33 (Pseudosaura).
Stejneger, L. 1907 A, 11 (Salamandroideæ).

AMBYSTOMIDÆ Stejneger.

Stejneger, L. 1907 A, 25.
Arldt, T. 1907 D, 637 (Amblystomidæ).
1916 A, 112 ("amblystomatinen").
Boulenger, G. A. 1882 A, 31 (Amblystomatinæ).
Cope, E. D. 1859 A, 122 (Amblystomatinæ).
1866 F, 105 (Amblystomidæ).
1868 N, 166 (Amblystomatinæ).
1885 DD, 311 (Amblystomidæ).
1889 A, 33, 45 (Amblystomidæ).
Cunningham and Boulenger 1912 A, 163, 168 (Amblystomatinæ).
Dunn, E. R. 1922 A, 423, 426.
Fejérváry, G. J. 1920 A, 352 (Amblystomidæ).
Gadow, H. 1901 B, 109 (Amblystomatinæ).
1905 A, 200 (Amblystomatinæ).
Gill, T. 1885 B, 18 (Amblystomidæ).
Hallowell, E. 1858, Jour. Acad. Nat. Sci., Phila. (2), iii (Amblystomidæ).
Kingsbury, B. F. 1895 A, 124 (Amblystomidæ).
Kingsbury and Reed 1909 A, 554 (Amblystomidæ).
Klaauw, C. J. 1924 B, 576 (Amblystomidæ).
Noble, G. K. 1922 A, 62 ("ambystomids").
1926 A, 1 (Ambystomidæ).
Palacký, J. 1899 B, i, 1 ("amblystomatiden").
Pompeckj, J. F. 1912 A, 340 ("amblystomatinen").
Reed, H. D. 1920 A, 326, 367 (Amblystomidæ).
Steiner, H. 1921 A, 520 (Amblystomatinæ).
Stejneger, L. 1907 C, 24.

AMBYSTOMA Tschudi. Type *Lacerta maculata* Shaw.

Tschudi, J. J. 1838, mém. Soc. Nat. Neuchâtel, 92.
Adams, L. A. 1919 A, pl. v (Amblystoma).
Albrecht, P. 1883 C, 196, figs. 2, 3 ("siredon").
Allis, E. P. 1909 A, 53 (Amblystoma).
1915 A, 616 (Amblystoma).
Altmann, F. 1925 A, 89 (Amblystoma).
Arldt, T. 1916 A, 113 (Amblystoma).
Baird, S. F. 1850 B, 281 (Amblystoma).
Beyer, H. 1907 A, 268 (Siredon).
Boulenger, G. A. 1882 A, 38 (Amblystoma).
Carlin, W. E. 1881 A, 120 (Siredon, Amblystoma).
Cope, E. D. 1859 A, 123 (Amblystoma).
1868 N, 167 (Amblystoma).
1875 D, 363 (Amblystoma).
1885 DD, 311 (Amblystoma).
1889 D, 47 (Amblystoma).
Cunningham and Boulenger 1912 A, 180, 213 (Amblystoma).
Cuvier, G. 1825 A, v, 2, 415, pl. xxvii ("axolotl").
Drüner, L. 1904 B, 509, pl. xiv, fig. 2; pls. xv, xvi, xx; text-figs. A, G (Amblystoma).
Dunn, E. R. 1922 A, 420.
1923 A, 133 ("ambystomid").
Edgeworth, F. H. 1920 A, 123 (Sirodon).
1925 A, 227, 231. fig. 41 (Amblystoma, Sirodon).
Fejérváry, G. J. 1921 C, 3 (Amblystoma).
Field, H. H. 1895 A, 341 (Amblystoma).
Gadow, H. 1896 A, 10 (Siredon).
1901 B, 109 (Amblystoma).
1905 A, 200 (Amblystoma).
Gaupp, E. 1898 B, 850 (Siredon).
1899 A, 1041 (Siredon).
1905 D, 947, fig. 14.
Gaupp, E. 1913 A, 44, figs. 15, 42 (Amblystoma).
Gegenbaur, C. 1862 A, 180, 192 (Siredon).
Giebel, C. G. 1855 A, 98 (Amblystoma).
Goeppert, E. 1896 B, 12, fig. 12 (Siredon).
Goodrich, E. S. 1911 A, 103, figs. 29-51 (Amblystoma).
Gray, J. E. 1850 A, 34.
Gregory, W. K. 1920 A, 117, fig. 22 (Amblystoma).
Gregory, Miner and Noble 1922 A, 283, figs. 2, 3.
Grote, A. 1926 A, 458, figs. 1-6 (Siredon).
Hanson, F. B. 1919 B, 68, fig. 22.
Hasse, C. 1873 B, 611, pl. xix (Siredon).
1873 D, 679 (Siredon).
1892 C, 17 ("axolotl").
Hasse and Schwarck 1870 A, 49 (Siredon).
Hay, O. P. 1889 B, 602 (Amblystoma).
Heilprin, A. 1887 A, 306 (Amblystoma).
Hertwig, O. 1874 B, pls. i-v (Siredon).
Higgins, G. M. 1920 A, 293 (Amblystoma).
Hoeven, J. v. d. 1866 A, 365 ("axolotl").
Hoffmann, C. K. 1874 A (Amblystoma, Siredon).
1878 B, 666, pls. viii, x (Amblystoma, Siredon).
Huene, F. 1922 G, 455.
Huxley, T. H. 1863 F, 429 (Siredon).
1872 A, 156, 161, fig. 58 (Siredon)
1874 B, 13 (Amblystoma).
1875 A, 45 (Siredon).
1875 C, 760 (Amblystoma).
Iwanzoff, N. 1894 A, 582 (Siredon).
Jaquet, M. 1897 A, 174 (Axolotl).
1898 B, 321, figs. 60, 61 (Axolotl).
1899 B, 189, pls. xli-xlv (Axolotl).
Kehrer, F. A. 1896 A, 352 (Amblystoma).
Kerr, J. G. 1902 A, 425 (Amblystoma).
Kesteven, H. L. 1919 A, 224 (Amblystoma).

Kingsbury, B. F. 1895 A, 124, pls. i, ii (Amblystoma).
1903 A, 326 (Amblystoma).
Kingsbury and Reed 1908 A, 82, 83, figs. 1-7.
1909 A, 554, 609, pls. i-iv.
Kingsley, J. S. 1900 A, 210 (Amblystoma).
1902 B, 329, 337 (Amblystoma).
1912 B, 44, 48, 84, figs. 37, 43, 84.
1925 A, 38, 125, 126, figs. 43, 132, 133 (Amblystoma).
Kupffer, C. 1893 A, 546 (Amblystoma).
Lebedinsky, N. G. 1917 A, 316 (Amblystoma).
Leunis and Ludwig 1883 A (Amblystoma).
Malbranc, M. 1875 A (Siredon).
Meyer, H. 1860 E, 48 (Siredon).
Miner, R. W. 1925 A, 171, 174, 179 (Amblystoma).
Mivart, St. G. 1870 A, 264 (Amblystoma).
1874 B, 182, fig. 61 ("axolotl").
Moodie, R. L. 1908 G, 519.
Noble, G. K. 1921 A, 3.
1925 C, 1.
1926 A, 1.
Owen, R. 1844 C, 23, fig. (Axolotes).
1845 B, 189, pl. lxii, fig. 4 (Axolotes).
1866 A, 87 (Axolotes).
Parker, W. K. 1877 B, 529, pls. xxi-xxvii (Amblystoma).
1882 D, 209 (Amblystoma).
Parker and Bettany 1877 A, 122 (Amblystoma).
Parker and Haswell 1897 A, 278, 289, 891, 896 (Amblystoma).
Peter, K. 1898 A, 587 (Siredon).
Rabl, C. 1901 A, 513 ("axolotl").
Reed, H. D. 1920 A, 325 (Amblystoma).
Retterer, E. 1908 A, 486 ("axolotl").
1908 B, 537 ("axolotl").
Reynolds, S. H. 1897 A, 135, 175 (Amblystoma).
Röse, C. 1894 C, 180 (Amblystoma).
Schmalhausen, J. J. 1916 B, 139 (Siredon).
1910 A, 439 (Amblystoma).
Scott, P. G. 1916 A, 309 (Amblystoma).
Sewertzoff, A. N. 1896 A, 245 (Siredon).
1908 A, 171, 345 (Siredon); 359 (Amblystoma).
Sirena, S. 1872 A, 125, 134 (Siredon).
Stadtmüller, F. 1926 A, 159, fig. 5 (Amblystoma).
Stannius, H. 1856 A (Siredon).
Steiner, H. 1921 A, 516, 520, figs. 1, 8, 14.
1922 A, 317, 331, 340 (Amblystoma).
Stöhr, P. 1880 A, 487, 504 (Siredon).
Sutton, J. B. 1884 A, 567 (Siredon).
Taschenberg, O. 1894 A, 3530 (Amblystoma).
Terry, R. J. 1906 A, 95 (Amblystoma).
Versluys, J. 1912 C, 318, figs. 7, 18.
Wallace, A. R. 1876 A, ii, 413 (Amblystoma).
Wegner, R. N. 1922 A, 417 (Amblystoma).
Wiedersheim, R. 1877 A, pls. (Amblystoma).
1877 B, *passim*, pl. i, fig. 6; pl. iii, figs. 28-34, 36, 44; pl. v, fig. 73 ("axolotl"); pl. v, figs. 75-77 (Amblystoma).
1879 A, 216, pls. xi, xii (Amblystoma).
1880 D, 581, pl. xxx ("axolotl").
Wilder, I. W. 1920 A, 349.
Winslow, G. M. 1898 A, 150, figs. 1-13 (Amblystoma).
Wintrebert, P. 1910 A, 178, 419 (Amblystoma).
1910 B, 129 ("axolotl").
Zwick, W. 1897 A, 66 (Siredon).

Ambystoma? sp. indet.

Brown, B. 1908 A, 206, pl. xxii (Amblystoma?). Pleistocene; Arkansas.

PLETHODONTIDÆ Gray.

Gray, J. E. 1850, Cat. Batr. Grad. Brit. Mus., 31.
Boulenger, G. A. 1882 A, 51 (Plethodontinæ).
Cope, E. D. 1889 D, 33, 119, 523.
Noble, G. K. 1925 C, 3.
Noble, G. K. 1927 A, 1, figs. 1-10.
Peterson, O. A. 1926 A, 251.
Stejneger and Barbour 1923 A, 8.
Peterson, O. A. 1926 A, 251. Pleistocene; Pennsylvania.

UNDETERMINED GENUS AND SPECIES OF PLETHODONTIDÆ.

Desmognathus sp. indet.

Peterson, O. A. 1926 A, 252 (This genus?). Pleistocene; Pennsylvania.

SALAMANDRIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 68.
Abel, O. 1919 A, 330.
1921 A, 252 ("salamandern").
Albrecht, P. 1883 C, 196, fig. 4 (Salamandra).
Allis, E. P. 1919 E, 368 (Salamandra).
Altmann, F. 1925 A, 88, figs. 1-5 (Salamandra).
Anton, W. 1911 A, 179 ("salamandriden").
Arldt, T. 1916 A, 105 ("salamandriden").
Beer, G. R. 1926 A, 308, figs. 73-75 (Salamandra).
Bischoff, T. L. W. 1840 B, 114 ("salamandres").
Blainville, H. M. D. 1835 A, 281 ("salamandres").
Bolk, L. 1913 A, 115, fig. 74 (Triton).
Carus, V. 1875 A, 481 (Salamandrina).
Cope, E. D. 1859 A, 122.
1885 DD, 315.
[4]Cunningham and Boulenger 1912 A, 161, 168.
Cuvier, G. 1805 A ("salamandres").
1825 A, v, 2, 406, pl. xxv ("salamandres").
Dollo, L. 1884 D, 91.
Drüner, L. 1904 B, 362 (Salamandra).
Dunn, E. R. 1922 A.
1923 A, 132.
Frassetto, F. 1915 A, figs. 7, 13 (Salamandra).
Gadow, H. 1896 A, 4, figs. 1-3, 9-13 (Salamandra, Triton).
1901 B, 102.
Gaupp, E. 1899 A, 1042 (Ranodon).
1900 A, 566 ("triton").
1902 A, 168, fig. 3 (Triton).
1905 D, 931, 936, figs. 9-13 ("salamandriden").
Gegenbaur, C. 1862 A, 180 (Salamandra).
1867 B, 396 ("salamandriden").

Geoffroy St. Hilaire, E. F. 1832 A, 351 ("salamandres").
Gervais, P. 1859 A, 498 ("salamandrides").
Goeppert, E. 1896 B, 5, figs. 4-11 (Salamandra, Triton).
Gray, J. E. 1825 A, 215.
Grote, A. 1926 A, 484 (Salamandra).
Hase, A. 1913 A, fig. 50.
Hasse, C. 1873 B, 615 (Salamandrinæ).
1892 A, 254 ("salamandrinen").
1892 C, 1 (Triton).
Hasse and Schwarck 1870 A, 35, 50 ("salamandriden").
Hatschek, B. 1889 A, 84, fig. 2 ("salamander").
Henshaw, H. W. 1912 A, 318 ("salamanders").
Hertwig, O. 1874 B, pls. i-v ("salamandrinen").
Hilzheimer, M. 1913 A, 473 ("salamandriden").
Hoeven, J. v. d. 1866 A, 364 (Salamandra).
Hoffmann, C. K. 1874 A (Salamandra).
1878 B, 666 (Salamandrida).
Hofmann, K. 1923 A, 432 (Salamandra).
Hogg, J. 1839 A, 274.
1841 A, 361.
Howes, G. B. 1893 B, 276 (Salamandra).
Huxley, T. H. 1859 D, 403 (Triton).
1863 C, 569 ("salamander").
1874 B, 14 ("salamanders").
1875 A, 45 (Triton).
1875 C, 760 (Salamandrida).
1879 A, pl. iii (Salamandra).
Iwanzoff, N. 1894 A, 582 (Salamandra).
Jaekel, O. 1909 D, 722 (Triton).
Kapelkin, W. 1900 A, pls. v, vi (Salamandra, Triton).
Kehrer, F. A. 1896 A, 352 ("salamandriden").
Kerbert, C. 1876 A, 215 (Triton).
Kingsbury and Reed 1908 A, 88.
Kingsley, J. S. 1901 B, 337 (Salamandrina).
1925 A, 246 (Salamandrina).
Klaauw, C. J. 1924 B, 576 (Salamander).
Klintz, J. H. 1911 A, 165 (Salamandra).
Köstlin, O. 1844 A ("Salamander").
Kupffer, C. 1893 A, 530 (Salamandra, Triton).
Lavocat, A. 1885 A, 33 ("salamandres").
Leunis and Ludwig 1883 A, 624 (Mecodonta).
Leydig, F. 1890 A, 465 (Salamandra).
Lobley, J. L. 1908 A, 203, 209.
Loomis, F. B. 1919 A, 217.
Malbranc, M. 1875 A (Salamandrina).
Meckel, J. F. 1825 A ("salamander").
Meyer, H. 1860 E, 47 ("salamandriden").
Mivart, St. G. 1870 A, 264, fig. 12.
Mivart and Clarke 1879 A, 524, text-fig. 6 (Salamandra).
Mollier, S. 1895 B, 2 (Salamandra).
Nauck, E. T. 1926 B, 38, 75, figs. 6, 7 (Triton).
Noble, G. K. 1922 A, 62 ("salamandrids").
Nopcsa, F. 1923 B, 354 ("molche").
Oken, L. 1823 B, 445 ("lurche").
Owen, R. 1845 B, 193 ("newts").
1866 A.
1868 A, 907.
Palacký, J. 1899 B, 1 ("salamandriden").
Paramore, R. H. 1910 A, 1395 ("salamander").
Parker, W. K. 1882 C, 195, 197, pls. xl, xli ("newts").
Parker and Bettany 1877 A, 134 (Triton).
Parker and Haswell 1897 A, 280, figs. 893, 896, 897.
Perrin, A. 1899 A, 522, fig. 2 (Triton).
Peter, K. 1898 A ("salamandriden").
Petronievics, B. 1921 A, 107, 109 ("salamandrines").
Pompeckj, J. F. 1912 A, 340.
Rabl, C. 1901 A, 500 (Triton).
Reichert, K. B. 1849 A, 510 ("tritonen").
Retterer, E. 1908 A, 487 ("salamandre").
1908 B, 537 ("salamandre").
Reynolds, S. H. 1897 A, 135, 175, 182 (Salamandrina).
Röse, C. 1894 C, 180 (Triton).
Schmalhausen, J. J. 1910 A, 431 (Salamandrella).
1916 B, 143 (Triton).
1917 B, 130 ("tritons").
Sewertzoff, A. N. 1908 A, figs 16, 17 (Triton).
1926 D, 84 (Salamandrella).
Seydel, O. 1899 A (Salamandra).
Sirena, S. 1872 A, 126, 134 (Triton).
Stadtmüller, F. 1925 A, figs. 1-41 (Salamandra).
1926 A, 157, figs. 3-5 (Salamandra).
Stannius, H. 1856 A, 4, seq. (Salamandra).
Steiner, H. 1921 A, 520.
Stejneger, L. 1907 C, 11.
Stöhr, P. 1880 A, pls. xxix, xxx (Triton, Salamandra).
Strasser, H. 1879 A, 240 ("salamander").
Tarapani, H. 1909 A, 57 (Salamandra, Triton).
Taschenberg, O. 1894 A, 3543.
Terra, P. 1911 A, 224.
Tomes, C. S. 1875 A, 94 ("newt").
Versluys, J. 1912 C, 313, figs. 3, 5, 6, 9, 22 (Salamandra).
Villiers, C. G. S. 1922 A, 191 ("salamandriden").
Vitali, G. 1909 A, 208 (Triton).
Wagner, R. 1843 A ("salamander").
Wallace, A. R. 1876 A, ii, 413.
Wiedersheim, R. 1880 A, 26 ("salamandriden").
1892 A, 48 ("salamandrinen").
Wintrebert, P. 1910 A, 300 ("salamander").
1910 B, 78, 173 ("salamandrides").
Zittel and Broili 1911 A, 176 (Salamandrina).
1923 A, 206 (Salamandrina).
Zwick, W. 1897 A, 69 (Triton, Salamandra).

Ototriton formerly assigned to this family is now referred to the reptilian family Amphisbænidæ.

Order SALIENTIA Laurenti.

Unless otherwise indicated the authors quoted employ the name *Anura*.

Laurenti, J. N. 1768, Syn. Rept., 24.
Hay, O. P. 1902 A, 424 (Salientia).
Abel, O. 1919 A, 311.
1920 A, 346.
1921 A, 144 ("anuren").
Adams, L. A. 1919 A, 145.
Agassiz, L. 1844 D, 137 ("batracians").
Albrecht, P. 1883 C, 195 ("anoures").
Allis, E. P. 1923 A, 48.
Anderson, R. J. 1912 D, 251.
Anthony, R. 1913 A, 243 ("anoures").
Anthony and Vallois 1914 A, 220 ("anoures").

Arldt, T. 1907 D, 638.
1912 A, 678.
1916 A, 114 ("anuren").
Baraldi, G. 1877 A, 8 ("anoures").
Bardeleben, K. 1889 A, 107 ("anuren").
1901 A ("anuren").
1904 A, 109 ("anuren").
Baur, G. 1885 L ("batrachians").
1897 D, 52 (Ecaudata).
Beer, G. R. 1926 A, 310.
Bender, O. 1907 A, 40 ("anuren").
1910 A, 125 ("anuren").
Beyer, H. 1907 A, 269 ("batrachier").
Blainville, H. M. D. 1835 A, 274 (Batrachia).
Boas, J. E. V. 1914 B, 554 ("anuren").
Bonaparte, C. L. 1832 A, 318 (Anoura).
1833 B, 1186 (Caducibranchia).
Boulenger, G. A. 1901 B, 402.
1902 F, 383 (Ecaudata).
Braus, H. 1906 A ("anuren").
1909 A.
Bridge, T. W. 1878 A, 725.
Broom, R. 1899 A, 766.
1909 B, 165.
Carter, J. T. 1905 A, 129, 140.
Carus, V. 1875 A, 473.
Cligny, A. 1899 A, 133 ("batraciens").
Cope, E. D. 1865 B, 97-120.
1865 C, 97.
1885 BB, 65.
1885 DD, 317.
Coyle, R. F. 1909 A, 582.
Cunningham, J. T. 1897 A, 487 (Batrachia).
Cunningham and Boulenger 1912 A, 165, 169, 211.
Dana, J. D. 1863 A, 1 ("tailless batrachians").
Delsman, H. C. 1924 A, 155.
Dollo, L. 1884 D, 86 (Anura).
1885 C, 303 ("anoures").
Dombrowsky, B. A. 1918 A, 197, 204.
1925 A, 71, fig. 2.
Duméril, A. M. C. 1906 A, 92 (Ecaudati).
Dunn, E. R. 1923 A, 130.
Ebner, V. 1896 A, 146 ("batrachier").
Edgeworth, F. H. 1920 A, 127.
1925 A, 225.
Eimer, G. H. T. 1901 A, 62, 242 ("anuren").
Elliot, A. I. M. 1907 A, 648.
Emery, C. 1890 A, 283 ("anuren").
1895 A, 218 ("anoures").
Fejérváry, G. J. 1917 A, 1-38 ("anoures").
1921 C, 1-30.
Frassetto, F. 1915 A ("anuri").
Fuchs, H. 1908 A, 354 ("anuren").
1909 B, 122, 148 ("anuren").
1909 D, 8, 76 ("anuren").
1911 A, 34 ("anuren").
1912 D, 153 ("anuren").
1922 A, 283.
1926 A, 119.
1926 B, 1-34.
Fürbringer, M. 1904 A, 594 ("anuren").
Gadow, H. 1901 A, 398.
1901 B, 18, 138 (Salientia).
1902 B, 346.
1905 A, 205.
Gaupp, E. 1895 A, 58, seq. ("anuren").
1898 B ("anuren").
Gaupp, E. 1899 A, 1004, 1047 ("anuren").
1900 A, 574 ("anuren").
1901 B, 950 ("anuren").
1902 A, 217 ("anuren").
1905 A, 286.
1905 D, 931, 969 ("anuren").
1906 A, 24 ("anuren").
1906 B, 718 ("anuren").
1910 C, 406.
1911 A, 418, 422 ("anuren").
1911 B, 116 ("anuren").
1911 C, 441 ("anuren").
1913 A, 23 ("anuren").
Gegenbaur, C. 1867 B, 404.
1888 A, 394 ("anuren").
Gelderen, C. 1922 A, 234.
1923 A, 15.
1925 A, 502.
Gervais, P. 1853 B, 54 ("anoures").
Gill, T. 1897 A, 447 (Salientia).
Goeppert, E. 1896 B, 20 ("anuren").
1897 A, 248 ("anuren").
Gray, J. E. 1825 A, 213 (Anoura).
Gregory, W. K. 1917 B, 317.
1920 A, 224.
Gregory and Adams 1915 A, 763.
Gregory, Miner and Noble 1923 A, 285.
Günther, A. 1858 A, 339, 342.
Haeckel, E. 1868 A, 450.
Hase, A. 1913 A, figs. 39, 45.
Hasse, C. 1873 B, 614 ("batrachier").
1892 A, 253 ("anuren").
Hasse and Schwarck 1870 A, 48, 51 ("batrachier").
Heilprin, A. 1887 A, 307.
Henshaw, H. W. 1912 A, 318 ("frogs and toads").
Hertwig, O. 1874 B, 21 ("anuren").
Higgins, G. M. 1920 A, 293.
Hilzheimer, M. 1913 A, 475 ("anuren").
Hoernes, R. 1886 A, 577.
Hoeven, J. v. d. 1866 A, 364 (Anoura).
1891 A, 158, pl. xiv, fig. 3.
Hoffmann, C. K. 1878 B, 612.
Hommes, J. H. 1924 A, 37 ("anures").
Howes, G. B. 1893 B, 270.
1902 A, 525.
Howes and Swinnerton 1901 A, 17.
Huene, F. 1922 G, 454 ("anuren").
1926 A, 265 ("anuren").
Huxley, T. H. 1859 D, 412, 445.
Ihering, H. 1880 A, 299 ("anuren").
Iwanzoff, N. 1894 A, 579 ("anuren").
Jacobshagen, E. 1920 A, 91 ("anwien").
Jaekel, O. 1909 A, 194 ("anuren").
Kapelkin, W. 1900 A ("anuren").
Kehrer, F. A. 1896 A, 353.
Kingsley, J. S. 1900 A, 212.
1901 B, 337.
1925 A, 40, 130, 280.
Klaauw, C. J. 1924 B, 579.
Klein, E. F. 1868 A (Ecaudata).
Köstlin, O. 1844 A ("ungeschwänzte").
Koken, E. 1896 B, 143.
Kothe, K. 1910 A, 29 ("anuren").
Kravetz, L. P. 1906 A, 6.
Laaser, P. 1903 A, 573 ("frösche").

Lucas, F. A. 1907 A, 202 ("anoures").
Lataste, F. 1888 A, 236 ("anoures").
Lavocat, A. 1885 A, 33 ("anoures").
1889 A, 43 ("batraciens").
Lebedinsky, N. G. 1917 A, 316 ("anuren").
LeDamany, P. 1902 A, 334 ("anoures").
1906 A, 38 ("anoures").
1906 B, 158 ("anoures").
Leunis and Ludwig 1883 A, 607.
Malbrâne, M. 1873 A (Batrachia).
Meckel, J. F. 1825 A ("ungeschwänzte").
Metcalf, M. M. 1923 A, 388.
Moodie, R. L. 1909 D, 243 (Salienta).
1909 F, 220 (Salienta).
1911 H, 243 (Salienta).
1912 B, 286 (Salienta).
1914 B, 531 (Salienta).
1915 F, 190 (Salienta).
1915 H, 633 (Salienta).
1916 A, 4, 72 (Salienta).
Nicholls, G. E. 1915 A, 259.
1916 E, 80.
Noble, G. K. 1922 A, 1-78, pls. i-xxiii.
1925 A, 265.
1925 B, 1.
1925 C, 1, 7.
1926 B, 1 ("frogs").
1926 C, 1.
Osborn, H. F. 1917 B, 178.
Owen, R. 1848 B, 88 ("anourans").
1866 A, 13 (Theriomorpha, Anura).
1868 A, 911.
Palacký, J. 1898 B, 374 ("batrachier").
Parker, W. K. 1879 C, 332 (Batrachia).
1880 B, 161 (Batrachia).
1887 B, 53 ("anurans").
Parker and Haswell 1897 A, 273.
Pehrson, T. 1922 A.
Perrin, A. 1896 A, 90 ("anoures").
Petersen, H. 1922 A, 22, figs. 1-6 ("anuren").
Petronievics, B. 1921 A, 107 ("anoures").
Pfeiffer, H. 1884 A, 46 ("ungeschwänzte").
Pompeckj, J. F. 1912 A, 338, 343.
Proctor, J. B. 1921 A, 197 (Ecaudsta).
Puccioni, N. 1908 A, 56 (Batraci).
Rabl, C. 1903 A, 184 ("anuren").
Reynolds, S. H. 1897 A, 532.
Ridewood, W. G. 1897 A, 359.
1897 C.
1898 A, 474.
Röse, C. 1892 G, 141 ("batrachier").
Sabatier, A. 1902 A, 99 ("anoures").
Sagemehl, M. 1883 A ("anuren").
Sauerbrey, H. 1906 A, 49 ("anuren").
Schmalhausen, J. J. 1907 A, 178 ("anuren").
1908 A, 337 ("anuren").
1916 B, 185.
1917 A, 163.
Schöne, G. 1902 A, 9 ("anuren").
Schuchert, C. 1915 A, 300.
Schwarz, H. 1908 B, 101 ("anuren").
Seeley, H. G. 1872 B, 27 ("anurous amphibia").
1888 I, 235.
Sewertzoff, A. 1896 A, 207.
1904 A, 484.
1908 A, 339 ("anuren").
1926 D, 75, fig. 4 ("anuren").
Sollas, W. J. 1920 A, 525.
Sonies, F. 1907 A, 405 ("anuren").
Spencer, W. B. 1896 A, 173.
Steiner, H. 1921 A, 519 ("anuren").
Stejneger, L. 1907 A, 47.
Stejneger and Barbour 1917 A, 25 (Salientia).
Sterling, S. 1908 A, 334.
Stöhr, P. 1881 A, 68 ("anuren").
Streeker, C. 1887 A, 307 ("batrachier").
Stromer, E. 1912 A, 57.
Suschkin, P. P. 1910 A, 244.
Taschenberg, O. 1894 A, 3547 (Ecaudati).
Terra, P. 1911 A, 224.
Tschudi, J. J. 1839 A, 25 (Batrachia).
Van Gelderen, C. 1925 A, 505 ("anuren").
Versluys, J. 1912 B, 506 ("anuren").
1912 C, 314 ("anuren").
Vialleton, L. 1917 A, 191 ("anoures").
Villiers, C. G. S. 1922 A, 153-225 ("anuren").
Virchow, H. 1914 C, 132 ("anuren").
Wagner, R. 1843 A.
Watson, D. M. S. 1914 D, 168 (Batrachia).
1916 C, 632.
1917 A, 979 ("frogs and toads").
1917 B, 56.
1919 B, 38 (Ecaudati).
1919 C, 239.
Wegner, R. N. 1922 A, 413 ("anuren").
Wiedersheim, R. 1892 A, 50 ("anuren").
Williston, S. W. 1914 A, 3 ("frogs").
1916 B, 211 (Batrachia).
Winslow, G. M. 1898 A, 172.
Wintrebert, P. 1910 B, 172 ("anoures").
Wortman, J. L. 1920 A, 42 ("anourous batrachia").
Zittel and Broili 1911 A, 177.
1923 A, 206.
Zittel, Eastman, etc. 1902 A, 137.

Suborder Bufoniformes Cope.

Cope, E. D. 1865 B, 97, 100, 104 (Bufoniformia).
Abel, O. 1919 A, 322 (Arcifera).
Arldt, T. 1916 A, 106, 146 ("Arciferen").
Braus, H. 1919 A, 7, 16, 44 (Arcifera).
Cope, E. D. 1866 F, 67.
1867 G, 189, 199.
1875 X, 20 (Bufoniformia, Arcifera).
1885 DD, 326 (Arcifera).
1889 D, 246, 248, 256 (Arcifera).
1891 N, 33 (Arcifera).
Cunningham and Boulenger 1912 A, 166 (Arcifera).
Dumeril and Bibron 1841 Erpet. Gen., viii, 50, 303 ("bufoniformes").
Fejervary, G. J. 1921 C, 28 ("Arcifera"), 127 (Bufonimorpha).
Gelderen, C. 1925 A, 501 (Arcifera).
Lydekker, R. 1890 A, 124 (Arcifera).
Noble, G. K. 1922 A, 12, 22, 41, table 2 (Procoela); 17 (Arcifera).
Pompeckj, J. F. 1912 A, 338, 344 (Arcifera).
Proctor, J. B. 1921 A, 197 (Arcifera).
Villiers, C. G. S. 1922 A, 155, 168 (Arcifera).

PELIONTIDÆ Cope.

Cope, E. D. 1875 X, 11.
Hay, O. P. 1902 A, 410 (Protritonidæ).
Gregory, W. K. 1917 B, 313 (Peleontidæ).
Moodie, R. 1916 A, 72.

PELION Wyman. Type *P. lyellii* Wyman.

Hay, O. P. 1902 A, 411.
Abel, O. 1919 A, 296.
Case, E. C. 1917 A, 135.
1919 B, 200.
Gaudry, A. 1875 A, 304 (Raniceps).
Gregory, W. K. 1917 B, 316.
Heilprin, A. 1887 A, 310.
Huxley, T. H. 1863 C, 571 (Raniceps).
Moodie, R. L. 1909 E, 40.
1916 A, 72.
Owen, R. 1860 E, 183 (Raniceps).
Pompeckj, J. F. 1912 A, 346.

Pelion lyellii Wyman.

Hay, O. P. 1902 A, 411.
Gaudry, A. 1875 A, 304 (Raniceps).
Gaudry, A. 1875 E, 443 (Raniceps).
Gregory, W. K. 1917 B, 316 (P. lyelli).
Metcalf, M. M. 1923 A, 405.
Moodie, R. L. 1908 E, 561, fig. 1.
1908 F, 254 (P. lyelli).
1909 B, 25.
1909 D, 240, pl. i (P. lyelli).
1909 E, 40 (P. lyelli).
1912 B, 286.
1914 A, 24 (P. lyelli).
1914 B, 531 (P. lyelli).
1916 A, 73, pl. xxiv, figs. 1, 17 (P. lyelli).
Pompeckj, J. F. 1912 A, 346 (P. lyelli).
Wyman, J. 1857 B, 172 ("batrachian reptile").
1857 C, 360 ("reptile").
Pennsylvanian (Linton); Ohio.

BUFONIDÆ Günther.

Günther, A. 1858, Cat. Batr. Sal. Brit. Mus., 54.
Arldt, T. 1907 D, 642.
1912 A, 689.
1916 A, 129, 143 ("bufoniden").
Carus, V. 1875 A, 478.
Cope, E. D. 1865 B, 102, 114.
1885 DD, 327.
Cunningham and Boulenger 1912 A, 166, 169.
Cuvier, G. 1805 A ("crapauds").
Dunn, E. R. 1923 A, 130.
Fejérváry, G. J. 1917 A, 11, 18 (Bufonidæ, Bufoninæ).
1921 A, 28 ("bufonides").
1921 C, 19, 22.
Gadow, H. 1901 B, 166.
1905 A, 205.
Gaupp, E. 1905 D, 991.
Hasse, C. 1892 A, 254 ("kröten").
Hoffmann, C. K. 1878 B, 607.
Köstlin, O. 1844 A ("kröten").
Leunis and Ludwig 1883 A, 616.
Lobley, J. L. 1908 A, 203.
Meckel, J. F. 1825 A ("kröten").
Metcalf, M. M. 1923 A, 401, fig. 12.
Moodie, R. L. 1912 B, 287.
Nicholls, G. E. 1916 A, 81.
Noble, G. K. 1922 A, 20, 22, 67.
1926 A, 12.
Owen, R. 1845 B, 194.
1866 A, 15.
Palacký, J. 1898 B, 376.
Proctor, J. B. 1921 A, 208, 214.
Ridewood, W. G. 1898 A, 475, 482.
Stannius, H. 1856 A (Bufonion).
Steiner, H. 1921 A, 528.
Stejneger, L. 1907 C, 55.
Wallace, A. R. 1876 A, ii, 415.
Zwick, W. 1897 A, 100.

BUFO laurenti. Type *Bufo vulgaris* Laurenti.

Laurenti, J. N. 1768, Syn. Rept., 25.
Abel, O. 1919 A, 315, fig. 238.
Adolphi, H. 1896 A, 115, pl. viii.
Anthony and Vallois 1914 A, 259.
Arldt, T. 1907 D, 642.
1916 A, 121.
Bardeleben, K. 1901 A, 51.
Blainville, H. M. D. 1835 A, 277.
Boas, J. E. V. 1914 C, 253, figs. 30, 31.
Braus, H. 1909 A.
1919 A, 10, 25, fig. 1.
Bronn, H. G. 1849 A, 684.
Camp, C. L. 1917 A, 289.
Cope, E. D. 1885 DD, 321.
Cunningham and Boulenger 1912 A, 166.
Dunn, E. R. 1923 A, 131.
Eggert, B. 1927 A, 566.
Eimer, G. H. T. 1901 A, 256.
Field, H. H. 1895 A, 341.
Foote, J. S. 1916 A, 46, pl. iii.
Frassetto, F. 1915 A.
Gadow, H. 1896 A, 15.
Gadow, H. 1901 B, 169.
Gaupp, E. 1899 A, 1052.
Giebel, C. G. 1855 A, 98.
Goeppert, E. 1896 B, 25, fig. 19.
Gregory, W. K. 1920 A, 118, fig. 25.
Hanson, F. B. 1919 B, 68, fig. 21.
Hasse, C. 1892 A, 254.
Heilprin, A. 1887 A, 307, 312.
Hoffmann, C. K. 1874 A, 18, 28.
1878 B, 608, 643, pls. x-xii, xiv, xv.
Iwanzoff, N. 1894 A, 580.
Kingsley, J. S. 1925 A, 247, fig. 261.
Metcalf, M. M. 1923 A, 401, fig. 11.
Miller, N. 1909 A, 641.
Moodie, R. L. 1912 B, 287.
Nehring, A. 1880 A.
Nicholls, G. E. 1914 A, 420.
1916 A, 80.
Noble, G. K. 1922 A, 20, 25.
1925 A, 271.
Owen, R. 1848 B, 88.
1866 A, 177, 183.

Owen, R. 1868 A, 868.
Palacký, J. 1898 B, 374.
Parker, W. K. 1877 B, 582.
1880 B, 161.
Parker and Bettany 1877 A, 177.
Proctor, J. B. 1921 A, 208.
Reynolds, S. H. 1897 A, 169, 182, 186.
Ridewood, W. G. 1897 A.
1897 C.
Schmalhausen, J. J. 1908 A, 341, fig. 4.
1917 A, 102.
Stannius, H. 1856 A, 41, 42.
Stejneger, L. 1907 C, 55.
Stephan, P. 1900 A, 332.
Strecker, C. 1887 A, 307.
Taschenberg, O. 1894 A, 3548.
Versluys, J. 1912 C, 315, fig. 19.
Zwick, W. 1897 A, 100, fig. 19.

Bufo boreas halophilus Baird and Girard.

Baird and Girard 1853, Proc. Acad. Nat. Sci. Phila., 101 (B. halophila); 378 (B. boreas).
Boulenger, G. A. 1882 B, 295 (B. halophilus); 296 (B. boreas).
Camp, C. L. 1917 A, 287.
Cope, E. D. 1889 D, 267, 269, figs. (B. columbiensis halophilus).
Girard, C. 1854, in Baird, U. S. Mex. Bound. Surv., 26, pl. xli (B. halophila).
1858, U. S. Explor. Exped., Herp., 74, pl. vi (B. boreas).
Recent; California, Nevada, Lower California: Pleistocene; California.

Bufo nestor Camp.

Camp, C. L. 1917 A, 287, figs. 1-3.
Hay, O. P. 1927 D, 187.
Merriam, J. C. 1915 G, 96 ("toad").
Pleistocene (La Brea); California.

Bufo sp. indet.

Brown, B. 1908 A, 206, pl. xxii. Pleistocene; Arkansas.
Hay, O. P. 1924 D, 252. Pleistocene; Arkansas.
1927 D, 136. Pleistocene? Arizona (This genus?).
Moodie, R. L. 1914 B, 536. Miocene; Kansas.

Eobatrachus Marsh. Type *E. agilis* Marsh.

Hay, O. P. 1902 A, 425.
Arldt, T. 1912 A, 668.
1916 A, 114, 118, 120.
Fejérváry, G. J. 1921 C, 29.
Simpson, G. G. 1926 H, 204.

Eobatrachus agilis Marsh.

Hay, O. P. 1902 A, 425.
Arldt, T. 1916 A, 114.
Fejérváry, G. J. 1917 A, 6.
Lydekker, R. 1913 A, 19.
Metcalf, M. M. 1923 A, 399, 403.
Moodie, R. L. 1908 F, 258.
1909 D, 240.
1912 B, 286.
1914 A, 18.
1914 B, 532, figs. 1, 2.
Noble, G. K. 1922 A, 64.
Pompeckj, J. F. 1912 A, 344.
Simpson, G. G. 1926 E, 2, 4.
Jurassic (Como beds); Wyoming.

Suborder Raniformes Cope.

Cope, E. D. 1865 B, 97, 104, 114 (Raniformia).
Abel, O. 1919 A, 324 (Firmisternia).
Arldt, T. 1916 A, 131, 143 ("firmisternier").
Boulenger, G. A. 1882 B, 2 (Firmisternia).
Braus, H. 1919 A, 7, 9, 44 (Firmisternia).
Carus, V. 1875 A, 474 (Raniformia).
Cope, E. D. 1866 F, 190.
1867 G, 189, 190 (Raniformia).
1875 X, 8, 32 (Raniformia).
1885 DD, 339 (Firmisternia).
1885 GG, 318, 341 (Firmisternia).
1889 D, 246, 248, 383 (Firmisternia).
1891 N, 33 (Firmisternia).
Cunningham and Boulenger 1912 A, 165 (Firmisternia).
Duméril and Bibron 1841, Erpet. Gen., viii, 50, 303, 304 ("raniformes").
Fejérváry, G. J. 1921 C, 23 ("Firmisternia"); 27 (Ranomorpha).
Hoffmann, C. K. 1878 B, 608 (Raniformia).
Lataste, F. 1888 A, 237.
Lydekker, R. 1890 A, 121 (Firmisternia).
Nicholls, G. E. 1916 A, 87 (Diplasiocœla).
Noble, G. K. 1922 A, 12, 22, 41, table 2 (Diplasiocœla); 17 (Firmisternia).
1925 A, 265 ("frogs").
Pompeckj, J. F. 1912 A, 338, 344 (Firmisternia).
Villiers, C. G. S. 1922 A, 163 (Firmisternia).

RANIDÆ Bonaparte.

Bonaparte, C. L. 1831 A, 68.
Hay, O. P. 1902 A, 425.
Abel, O. 1912 F, 255 ("frösche").
Ahlborn, F. 1896 B, 7 ("frösche").
Anthony, R. 1913 A, 260.
Arldt, T. 1907 D, 678.
1916 A, 134 ("raninen").
Bonaparte, C. L. 1833 B, 1186.
Braus, H. 1919 A, 7, 9, 17.
Carus, V. 1875 A, 474.
Cope, E. D. 1865 B, 114.
1867 G, 191.
1885 DD, 340.
Cunningham and Boulenger 1912 A, 165, 169.
Cuvier, G. 1815 A, 106 ("grenouilles").
Eimer, G. H. T. 1901 A, 258 ("frösche").
Fejérváry, G. J. 1917 A, 21.
1921 A, 29.

Fejérváry, G. J. 1921 C, 19.
Gadow, H. 1901 B, 237.
1905 A, 208.
Gaupp, E. 1905 D, 979.
1910 C, 406 ("frösche").
Gelderen, C. 1922 A, 235.
Geoffroy-St. Hilaire, E. F. 1817 B, 186 ("grenouilles").
1832 A, 350 ("grenouilles").
Hasse, C. 1871 B, 377-416.
1873 B, 615 ("frösche").
1892 A, 254 ("frösche").
Hay, O. P. 1923 A, 312.
Hoffmann, C. K. 1878 B, 610, 613, 617.
Hogg, J. 1839 A, 273.
Kehrer, F. A. 1896 A, 353 ("frösche").
Köstlin, O. 1844 A ("frösche").
Leunis and Ludwig 1883 A, 610.
Lobley, J. L. 1908 A, 203.
Matthew, W. D. 1915 A, 296.
Meckel, J. F. 1825 A ("frösche").
Metcalf, M. M. 1923 A, 389.
Meyer, H. 1860 F, 123 ("frösche").
Nicholls, G. E. 1916 A, 82.
Noble, G. K. 1922 A, 22, 66.
Palacký, J. 1898 B, 375 ("raniden").
Ridewood, W. G. 1898 A, 475, 478.
Roux, J. 1905 A, 777.
Stannius, H. 1856 A (Ranina).
Steiner, H. 1921 A, 524, 528.
Stejneger, L. 1907 C, 92.
Wagner, R. 1843 A ("frösche").
Wallace, A. R. 1876 A, ii, 420.

Rana Linn. Type *R. temporaria* Linn.

Linnæus, C. 1758 A, i, 210.
Hay, O. P. 1902 A, 425.
Abel, O. 1912 F, 256, fig. 187.
1919 A, 312, figs. 232, 239, 242, 243, 246, 247.
Adams, L. A. 1919 A, 83, pl. v.
Allis, E. P. 1909 A, 192 ("frog").
1919 C, 259.
1923 A, 48.
Altmann, F. 1925 A, 92, figs. 6-8.
Anthony and Vallois 1914 A, 235, figs. 13, 31-33.
Arldt, T. 1907 D, 678.
1916 A, 134.
Baker, F. C. 1920 A, 213, 394.
Beer, G. R. 1926 A, 311, figs. 76-80.
Beyer, H. 1907 A, 270, figs. 2-5.
Boas, J. E. V. 1914 C, 250, figs. 23-25.
Bojanus, L. H. 1821 A, 1163.
Boulenger, G. A. 1920 A, 412.
Braus, H. 1909 A.
1919 A, 13, 21, 41, figs. 6, 7, 8.
Bronn, H. G. 1848 B, 1077.
1849 A, 684.
Broom, R. 1909 B, 162 ("frog").
Carus and Engelmann 1861 A, 1794.
Cle'and, J. 1863 B, 312 ("frog").
Cockerell, T. D. A. 1916 B, 183, 186 ("frog").
Cope, E. D. 1865 B, 117.
1885 DD, 319, 327, 341, figs. 189, 190.
Cuvier, G. 1805 A.
1825 A, v, 2, 386, pl. xxiv.
Delsman, H. C. 1913 A, 677.
Dombrowsky, B. A. 1918 A, 197, fig. 1.
Ebner, V. 1896 A, 149.
Edgeworth, F. H. 1920 A, 127, figs. 1-22.
1925 A, 231.
Eggert, B. 1927 A, 566.
Eisler, P. 1895 A, 54.
Elliot, A. I. M. 1907 A, 647.
Emery, C. 1890 A, 285, fig. 1.
Fejérváry, G. J. 1916 A, 131, pls. xi-xii; text-figs. 1-22.
Field, H. H. 1895 A, 341, pls. xii, xiii.
Foote, J. S. 1916 A, 35, pl. i.
1921 A, 4, pl. i, figs. 4, 5.
Fuchs, H. 1909 C, 100, fig. 12.
1922 A, 283, figs. 1-3.
1926 A, 120, figs. 1-6.
1926 B, 1-34, figs. 1-4.
Gadow, H. 1901 B, 249.
Gaupp, E. 1899 A, 1014, 1050 ("frosch").
1900 A, 567.
1901 B, 953, figs. 2, 3.
1902 A, 167, fig. 2.
1905 D, 971, fig. 22.
1906 B.
1908 B, 524.
1908 C, 668.
1910 C.
1911 C, 442.
1913 A, 10, fig. 3.
Gebhardt, F. A. M. W. 1907 A, 77.
Gegenbaur, C. 1862 A, 179, pl. ("frosch").
Gelderen, C. 1923 A, 30.
Gervais, P. 1859 A, 494, pl. lxiv.
Giebel, C. G. 1855 A, 98, pl. xlii, figs. 2, 5.
Goodsir, J. 1857 A.
Gregory, W. K. 1920 A, 118, fig. 24.
Hasse, C. 1871 B, 377-416, pl. xviii.
1873 B, 618.
1892 A, 254.
Heilprin, A. 1887 A, 307, 308, 312.
Hertwig, O. 1874 B, pls. i-v.
Hoffmann, C. K. 1878 B, 612, 618, pls. ii-iv, x, xi, xiii, xv.
Hommes, J. H. 1924 A, 37.
Howes, G. B. 1893 B, 268, figs. 1-3.
Huxley, T. H. 1853 A, 150 ("frog").
1859 D, 403, fig. 9.
1863 F, 428, figs. 39, 40 ("frog").
Ihering, H. 1880 A, 300, fig. 2.
Iwanzoff, N. 1894 A, 580.
Kesteven, H. 1916 A, 304.
1919 A, 223.
Kingsbury, B. F. 1895 A, 132, pl. v, figs. 37, 38.
1926 A, 98 ("frog").
Kingsbury and Reed 1909 A, 609 ("frog").
Kingsley, J. S. 1900 A, 212 ("frog").
1925 A, 131, 133, 247, 248, 263, figs. 140-143, 261-263, 303.
Klaauw, C. J. 1924 B, 579.
Köstlin, O. 1844 A.
Kothe, K. 1910 A, 44, figs. 20, 22-25, 27.
Lakjer, T. 1927 A, 202, figs. 108, 133.
LeDamany, P. 1902 A, 337 ("grenouille").
Leunis and Ludwig 1883 A, 611.
Leydig, F. 1890 A, 442.

Lobley, J. L. 1908 A, 199.
Malbranc, M. 1875 A.
Matthes, E. 1921 A, 217.
Metcalf, M. M. 1923 A, 398, fig. 8.
Meyer, H. 1860 F, 126, pls. xvi, xviii-xxii.
Mivart, St. G. 1879 B, 539, figs. 7-9 ("frog").
Nehring, A. 1880 A.
Nicholls, G. E. 1915 A, 239, figs.
Noble, G. K. 1922 A, 3, 25, 37.
1925 A, 269, 271.
1926 B, 10, 12, fig. 6.
Osborn, H. F. 1926 C, 340.
Owen, R. 1845 B, 193, pl. lxii, fig. 10.
1848 B, 37, fig. 13.
1868 A, 905.
Palacký, J. 1898 B, 374.
Parker, W. K. 1880 B, 161.
Parker and Bettany 1877 A, 176.
Parker and Haswell 1897 A, 245, figs. 869-886.
Petersen, H. 1922 A, 23, figs. 1-3, 5.
Pfeiffer, H. 1854 A, 46, pl. i, fig. 12.
Prashad, B. 1918 A, 1, figs. 1-8.
Proctor, J. B. 1919 A, 21.
Retterer, E. 1908 A, 487.
Reynolds, S. H. 1897 A, 541, figs. 24-26, 29, 30 (Rana, "frog").
Ridewood, W. G. 1897 A.
1897 C.
Roux, J. 1905 A, 783.
Schauinsland, H. 1906 A.
Schmalhausen, J. J. 1907 A, 183.
Schumann, A. 1904 A, 283.
Sewertzoff, A. N. 1908 A, 370, fig. 33.
Sirena, S. 1872 A, 128.
Sonies, F. 1907 A, 442.
Stannius, H. 1856 A.
Stejneger and Barbour 1917 A, 35.
Stöhr, P. 1881 A, 69, pls. ii, iii.
Struck, W. 1915 A, 139, fig. 8.
Sutton, J. B. 1884 A, 567.
Taschenberg, O. 1894 A, 3556.
Tomes, C. S. 1875 A, 94 ("frog").
Van Gelderen, C. 1925 A, 501.
Versluys, J. 1912 C, 315, figs. 1, 2, 4.
Villiers, C. G. S. 1922 A, 154, fig. 1.
Virchow, H. 1914 D, 320, fig. 1.
Wilder, B. G. 1865 A, 56.
Wyman, J. 1867 B, 261, fig. 7.
Zittel and Broili 1911 A, 178.
1923 A, 165, 207, figs. 260, 313, 314.

Rana sp. indet.

Hay, O. P. 1902 A, 425.
Brown, B. 1908 A, 206, pl. xxii. Pleistocene; Arkansas.
Hay, O. P. 1927 D, 138. Pleistocene; Arizona.
Peterson, O. A. 1926 A, 252. Pleistocene; Pennsylvania.

SUPPLEMENT

Abel, O. 1926 F

Über die Funde von Dinosauriereiern in China.

Verh. zool.-bot. Ges. Wien, LXXIV, (37), (39).

—— 1926 G

Lebensspuren in der oberen Trias des Connecticuttales in Connecticut und Massachusetts.

Verh. zool.-bot. Ges. Wien, LXXIV, (145)-(150).

—— 1926 H

Geschichte der Equiden auf dem Boden Nordamerikas.

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—— 1927 A

Neuere Studien über Panzerfische.

Verh. zool.-bot. Ges. Wien, LXXVII, (30)-(31).

—— 1927 B

Ein Beitrag zur Kenntnis von *Heterostius convexus* Asmuss aus den Alten Roten Sandstein von Aroküla bei Dorpat; die Gelenkverbindung zwischen den Schädeldach und dem Rumpfpanzer.

Palaeont. Zeitschr., IX, 314-319, figs. 1-3.

—— 1927 C

Remarks on *Batrachoides*.

Palæont. Zeitschr., IX, 329.

—— 1928 B

Das biologische Trägheitsgesetz.

Biol. Gen., IV, 1-102, pl. i, a table and 50 text-figs.

References to the literature occur in foot-notes.

—— 1928 A

Allognathosuchus, ein an die cheloniphage Nahrungsweise angepasster Krokodiltypus des nordamerikanischen Eozäns.

Palaeont. Zeitsch., IX, 367-374, 1 text-fig.

Bignon, Fanny 1899 A

Contribution a l'étude de la pneumaticité chez les oiseaux. Les cellules aériennes cervico-céphaliques des oiseaux et leurs rapports avec les os de la tête.

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Palaeont. Sinica (C), IV, fasc. 1, 1-179, pls. i-xii, 254 text-figs.

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Auditory organ of the labyrinthodonts (Abstract).

Bull. Geol. Soc. Amer., XXXIX, 301.

—— —— 1928 C

Auditory organs of some labyrinthodonts.

Bull. Geol. Soc. Amer., XXXIX, 485-489, 2 figs.

Bretz, J. H. 1928 A

Alternate hypotheses for channeled scabland.

Jour. Geol., XXXVI, 193-341, figs. 1-10.

Broili, F. 1927 D

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Citations of the literature in foot-notes.

—— 1927 E

Ein Stegocephalenrest aus dem Hauptmuschelkalk von Poppenlauer (Unterfranken).

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Bullman, O. M. B. 1928 A

Additional notes on some branchiosaurs from Odernheim.

Ann. Mag. Nat. Hist. (10), I, 250-255, figs. 1-4.

Cabrera, Angel 1927 A

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—— 1928 A

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Rev. Mus. La Plata, XXXI, 339-352, pls. i, ii and 6 text-figs.

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Spier, Leslie 1928 A

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